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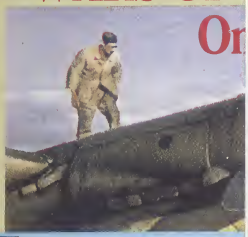

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Rabaul looked impregnable to the Allied forces in the Southwest Pacific, and rightly so. Still, a way was found to deal with the mighty Japanese bastion.

COVER: Gathering intelligence data on the foe—put in simplest form, determining what the enemy is about—has been one of warfare's major problems from time immemorial. In this wartime German photograph, a member of Erwin Rommel's vaunted *Afrika Korps* peers from a rocky emplacement across the North African desert floor, attempting to discern the movement of the British Eighth Army of General Bernard L. Montgomery before the Battle of El Alamein (story, Page 26). ABOVE: With the British attacking the beleaguered "Desert Fox" from one direction, their American Allies invaded from the other in the "Torch" operation of November 1942. Here, a battlefleet of American Army Sherman tanks assembles to engage the once-feared German panzers.

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"In the atomic field Soviet agents included Julius and Ethel Rosenberg. Morton Sobell, David Greenglass, Harry Gold, _____ (alias Alexander Stevens), to whom Whittaker Chambers acted as courier, and Jacob Golos, as well as Klaus Fuchs, who had been cleared by British security." (Page 458)

"Yet _____ was not a statist. He said he was against any attempt 'to smuggle fascism into America through the back door'. On many issues he was a liberal....He did not make anti-Semitic jokes, like Woodrow Wilson and his wife or Franklin Roosevelt. To a very wide spectrum of educated American opinion, he was the leading American public man..." (Page 243)

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A wheedling, irreverent young Dane was the Abwehr's *pet spy in England for nearly five wartime years.*

The German *Abwehr*, or military intelligence apparatus, was happy with the slim young man sometimes known as "Schmidt-Hansen," a native of the Danish Jutland. His face, wrote one of the *Abwehr*'s interviewers, was "fine and energetic, all his features and manners testifying to a good upbringing."

As further qualification, so far as the *Abwehr* was concerned, he had a good record as a prewar Nazi in his native land. Finally, he spoke English.

In no time flat, Hansen was paired with a pro-Nazi Swede named Goesta Caroli, and on the night of September 3, 1940—at the height of the Battle of Britain—they stepped out of a black-painted Heinkel above the timeless 13th-century cathedral town of Salisbury, England.

The ULTRA secret—and its being kept—gave the Allies some real heartaches, such as allowing the Germans to bomb British cities, as here: Nazi aircraft over London.

Their parachutes floated them down into a grove outside of town, but young Hansen landed in a tree. Cutting himself loose from the chute's rigging, he then fell to the ground and broke an ankle.

They stuck together, found a doctor and had Hansen's ankle set in a cast. In three days, still making his way to London to set up his spying base, Hansen radioed to his German superiors: "Roads blocked with refugees. Most of them look Jewish."

That pandering signal was the first of more than 1,000 that Hansen would be sending his superiors for nearly five wartime years spent as the elated *Abwehr*'s hottest spy in all England. "As far as the *Abwehr* was concerned, he was their pet, their pride, their miracle man," wrote Ladislas Farago in his 1971 bestseller *The Game of the Foxes*.

The broken ankle soon forgotten (and Caroli soon faded from view, too), Hansen may also have been the *Abwehr*'s most irreverent, wheedling, sulky or sentimental spy.

He thought nothing of filling the wartime airwaves with four-letter expletives when angered by his masters in Germany and their demands for specific information.

He complained quite freely: "You never let me know what you think of my work. An occasional pat on the back would be welcome. After all I am only human."

He told the *Abwehr* he had struck up a relationship with a young woman who worked as a secretary at the Allied invasion headquarters in Norfolk House. Among the tidbits of inside information he had gleaned from her, he signaled his German headquarters: "Well, what do you think of Mary? Isn't she quite a gal?"

So outstanding was his work in the *Abwehr*'s eyes that in the sixth week of his mission he was awarded the Iron Cross First Class—"the first spy in the field to be awarded the coveted decoration," says Farago.

Months later, an apparently sentimental Hansen came to his 1,000th signal to the *Abwehr*. "On the occasion of this, my one-thousandth message," he radioed, 'I beg to ask you to convey to our *Führer* my humble greetings and ardent wishes for a speedy victorious termination of the war."

The intelligence service had, in the meantime, performed handsprings in response to the mercenary Hansen's demands for money—and more money.

In 1941 (before Britain was at war with Japan), Hansen met a Japanese military attaché on a bus in London one evening and was given his fellow "passenger's" copy of the *London Times* as the attaché rose to leave the bus. Pasted to the inside pages were eighty £50 notes.

"Won't be reporting for a couple of days," radioed Hansen later that night. "I'm getting drunk tonight."

As it turns out, the *Abwher* should have wished he got drunk more often, fell under a bus or otherwise incapacitated himself. For Hansen, nearly at the moment he set broken foot on English soil, had been deftly "turned."

When Hansen broke his ankle landing in England by parachute, the *Abwehr* contacted one of its other "best spies" in England with instructions to lead Hansen to a "safe" doctor. The go-between, though, had been suborned earlier by Britain's counterespionage agency, MI.5, and when the *Abwehr* radioed *him*, it really was "talking" to none other than M1.5.

Hansen soon agreed to cooperate with his British captors, whereas the more uncooperative Caroli spent the war under lock and key (hence his fading from *Abwehr* view). Like the ULTRA code-breakthrough (story, Page 34), Hansen and many other double-agents like him represented a major intelligence coup—not for the *Abwehr*, but rather for MI.5.

C.B.K.

World War II

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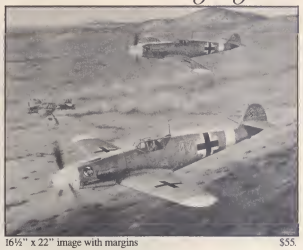
Marseille • Star of Africa



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Marseille had achieved 158 victories, the highest in the Western Theatre and was awarded the Knight's Cross with Oak Leaves, Swords and Diamonds. He was killed 30 September, 1942, bailing out and being struck by his own aircraft.

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The Manhattan Project at first gave the United States only a handful of unwieldy bombs.

By Lawrence M. Greenberg

In 1939, Albert Einstein and Leo Szilard drafted a letter to President Franklin Roosevelt proposing the feasibility of a new weapon. "It is conceivable," they wrote, ". . . that extremely powerful bombs of a new type may be constructed." In February 1940, initial funding for the special project was approved and by 1942 the Manhattan Engineering District began operation.

That summer, at the University of California at Berkely, Dr. J. Robert Oppenheimer hosted a meeting of physicists to discuss the use of nuclear fission—the splitting of atoms—to produce the new generation of powerful bombs. Soon Edward Teller, Enrico Fermi and Emil Konopinsky, all of whom had attended the symposium, joined Oppenheimer at Los Alamos, N.M., to form the core of the Manhattan Project's scientific cadre.

Prior to testing, the "Fat Man" atomic bomb is made ready for winching to the top of a tower at Ground Zero in the desert on the fateful morning of July 14, 1945.

Oppenheimer divided the research effort into two teams, each seeking different methods to split the atom. One group pursued fission using a relatively simple gun-type, or projectile, model. This system formed a supercritical mass of enriched uranium by forcing two smaller, subcritical ones together. Eventually, this research produced the Little Boy atomic bomb (originally named Thin Man), the uranium-based bomb employed at Hiroshima; it was deemed so reliable that full-scale tests were foregone.

Oppenheimer's second group of scientists worked on the more difficult implosion theory to achieve an atomic explosion. Instead of creating a supercritical mass from two subcritial ones, the implosion theory suggested that more efficient detonations were possible by compressing smaller and less refined quantities of plutonium. This could be achieved, argued implosionists, by explosively compressing plutonium into a very small sphere that would become supercritical. While theoretically more efficient, implosion presented greater technical problems than the gun-type system and, as a result, received the preponderance of efforts and resources. The Fat Man bomb (used at Nagasaki) proved the implosion group correct.

On July 16, 1945, one month before Secretary of War Henry L. Stimson was scheduled to begin negotiations in Potsdam, Admiral William D. Leahy's prophecy that "The bomb will never go off, and I speak as an expert on explosives," turned into so much vapor. At one minute before 0600, as Oppenheimer quoted a passage from the *Bhagavad-Gita*, "I am become death, the shattered of worlds," the New Mexican desert shook with the world's first atomic detonation. Sensing the greater implications of this new form of energy, physicist Kenneth Bainbridge turned to Oppeheimer and, as the fireball rose above New Mexico, told him, "Now we're all sons-of-bitches."

An investment of $20 billion and two years of work by 7,000 military and civilian personnel had given the United States the world's first operational atomic bomb. That night, in Washington, D.C., Secretary of War Stimson received a telegram from New Mexico that contained the following prognosis: "Operated on this morning. Diagnosis is not yet complete but results seem satisfactory and already exceed expectations."

Although the test was a success, would President Henry S. Truman authorize the new weapon's use? After Stimson informed the President of the successful test, Truman turned to his special Interim Committee for advice. Truman earlier had appointed Stimson and seven prominent government leaders and academicians to a special board to keep him apprised of Manhattan Project developments. Known as the Interim Committee, these eight men advised Truman on all matters relating to the fearsome new bomb and its employment by the military.

On June 17, 1945, Oppenheimer delivered the committee's unanimous recommendation to the President—that the bomb should be employed "at the earliest possible date" to bring the war to an end, potentially saving thousands of American and Japanese lives. Oppenheimer estimated the bomb's yield at 20,000 tons of conventional high explosives—the equivalent of more than 2,000 fully loaded B-29s. Although the scientists realized that atomic weapons would have devastating effects, they saw the new bombs as no less moral or humane than Curtis LeMay's fire-bombing campaign against Tokyo and other Japanese cities. The

Continued on page 55

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Both visionary and eccentric, Orde Wingate found new ways to fight the Japanese in Burma.

By Timothy Baker Shutt

There were reports of scattered thunderstorms—violent with the power of the pre-monsoon heat—but the weather was calm at Imphal in eastern India's Assam as Major General Orde Wingate took off for Lalaghat, bound for a strategy meeting with his air commander, Colonel Philip Cochran.

It had been a busy day—Wingate had already flown into the hand-hacked airstrips in Burma held down by his second "Chindit" expedition. After a rough start, things were going well at all three Chindit bases, and Wingate was filled with ambitious plans for his Long Range Penetration Groups. Perhaps with enough men—100,000 or so would do it, he thought—he could fight his way to Bangkok in Siam, or even Hanoi in French Indochina. Perhaps he could then drive on up th coast into China itself, as he had told Lord Louis Mountbatten. Things had moved so very fast the past year. Now, almost anything had begun to seem possible.

Orde Wingate was "Well-known for his ideas on the use of irregular native troops for attacks deep in the rear of the enemy."

It had not always been that way. In 1941 Wingate had been a disgruntled major in Cairo, unpopular with his peers, and so depressed that one malarial night he locked his door and cut his throat in two places. But now he was a major general (with a direct line to Churchill himself), the veritable "Clive of Burma," according to a giddy headline in the *Daily Mail* equating him with the famed 18th-century commander whose military brilliance had laid the groundwork for British hegemony in India.

Things were going very well indeed—Wingate's enemies among the higher-ups had for the moment at least been checkmated and silenced. His ideas had been borne out, and as the American B-25 took off from Imphal, bearing a pair of journalists and its crew, as well as the now-famous jungle fighter, Wingate relaxed in the copilot's seat—rumpled, bearded and wearing, as always while on campaign, his celebrated military pith helmet, a relic of the Empire as it had been in the days of Kipling. Such unconventional attire was not encouraged by the authorities, but it was entirely characteristic of Wingate, a gifted commander from first to last, but one of the oddest and most controversial figures of the Second World War.

It is difficult to imagine a soldier like Wingate—however capable and inventive—rising to such prominence in any army other than his own. But the British tolerate eccentricity, even relish it—even, at times, in the officer corps (witness the case of "Chinese Gordon" two generations before). And Wingate was certifiably eccentric in ways that almost certainly would have assured him short shrift as an officer had he been American, say, or German.

He was given to radical dietary experiments, living for extended periods on dried dates, or raw onions and grapes. In hot desert climates he refused to bathe, vigorously brushing himself instead. He enjoyed lounging around stark naked, and often received visitors so ungarbed—politicians and military men, no matter. And he was a tireless and eclectic reader. No real harm there, of course. But Wingate was given to monologues—on Scripture, on ancient philosophy, on whatever else at the moment had caught his wide-ranging and passionate fancy. When his prickly sense of justice was offended—every month or so, as it seems—he berated his superiors in Biblical terms, tirelessly composing memoranda. When conditions were favorable, he showed no hesitation in going over his commanders' heads to the highest authorities he could contact—and from the beginning he was a man of some influence. Furthermore, he was, on principle, harsh and demanding toward his men, ferocious in training and hard in the field.

But there was just something about him, something that kept people from writing him off—he was obnoxious, often outrageous, and many of his colleagues hated him. But no one seems to have thought him a fool; in his own way, he got results, often striking results. In spite of his brusqueness, he could lead troops. And he led them by strange routes to strange places.

Wingate had at least one early point in his favor. On both sides he came from an old Army family, and in England that counted for something. All the better, he was born, more or less on post, in the United Provinces of India in February 1903. His background was entirely presentable, even by old Army standards: Anglo-Scottish, military, and prosperous. And profoundly evangelical. So much so,

Continued on page 60

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Modern warships viewed in historical perspective

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THE BATTLE OF KHARKOV

Adolf Hitler basks in glory of dramatic Soviet defeat

German front-line cameramen filmed the onslaught of three Soviet armies in their ill-fated bid to retake the Russian city of Kharkov in May 1942. This crushing Soviet defeat cost the Red Army 250,000 men. The coordination of panzers, Luftwaffe, artillery, and infantry during the Germans' initial defense and subsequent counter-attacks is dramatically illustrated in this original Nazi newsreel. Spectacular aerial-bombardment footage and close-range armor duels highlight this remarkable feature. Adolf Hitler is also shown, visiting victorious troops near Kharkov after the battle, and flying to Finland for a conference with Finnish Marshal Mannerheim. Reproduced from original 35-millimeter negatives, with superb audio and visual quality. B&W, 27 minutes, English subtitles. #277

THE ANDERSON PLATOON

At last, the agony and brutality that is the real story of the Vietnam War

French producer Pierre Schoendorffer, who fought against Ho Chi Minh's guerrillas at Dien Bien Phu, spent six weeks with this single American platoon, led by black lieutenant Joseph B. Anderson, to film this riveting Academy Award-winning record. In this stirring account of a tragic war as experienced by regular army infantrymen, the camera constantly shows the tension, frustration, anger, and hopelessness of the participants. You'll see combat operations, interrogations, off-duty visits to a Vietnamese city, and everyday life at the front as men eat, sleep, fight, and die. It's a realistic, uncomplicated statement of a brutal war. B&W, 63 minutes. #365

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The shots at the arsenal in Warsaw were a key chapter in the history of Poland's fighting Scouts.

By Roman T. Gerlach

It was 4:30 a.m. as the Gestapo squad pounded on the door at 159 Independence Avenue in Warsaw. Contrary to their usual practice of racing through deserted streets at a breakneck pace and coming to a screeching halt in front of the victim's home, the Gestapo vehicles had arrived stealthily, their lights dimmed, their motors muffled.

The Germans awakened the doorkeeper and in hushed voices ordered him to let them in. They climbed the stairs to the third floor quietly—only when they felt their prey to be safely within their grasp did they let loose a barrage of blows, kicks and shouts, demanding peremptorily that the apartment door be opened at once.

Roused from sleep, Pan Stanislaw opened the door slightly with a churlish question, "What's the hurry? What's the hurry?"

A *Stapoman* cursed and kicked the door wide open. A heavy blow fell on Pan Stanislaw's head as others pushed past, heading straight for his son Rudy Bytnar's bedroom. They seemed to know the layout of the apartment, and they caught Rudy attempting to repeat his feat of three months before when he had escaped a house-to-house manhunt by sliding down a rope flung out of a window. This time, however, he was not quick enough.

They now subjected the whole apartment to a minute search. They emptied the cabinets and wardrobes of books, clothing and china; they inspected them for secret compartments; they knocked on the walls to detect empty spaces and scanned the ceilings and floors for telltale cracks. Finally, they set about jerking the legs from chairs and slashing upholstery.

But the *Stapomen* found nothing. The cleverly constructed cache in the base of a stout book cabinet eluded their detection, as did the other hideaway, located behind the swing-out sink in the bathroom.

A Germany Army M349 machine-gun team blasts away during the invasion of Poland in September 1939. Although defeated, the Poles would rise to fight on again.

At this point, the German in charge, *SS-Oberscharführer* Schultz, who spoke fluent Polish, approached the cage of the family's pet parrot, Jo-Jo, to check it for a false bottom. As his peaked cap came close to her cage, Jo-Jo shrieked, "Sieg! Heil! Sieg! Heil!" then added solemnly, "Kiss my arse! Kiss my arse!"

The German's eyes lit up. He straightened and gave Rudy a long, long look.

For three years now, one thing had been bothering Poland's German occupiers. Their Governor General Hans Frank's first official proclamation to the Polish people, posted in the streets of Warsaw, soon accumulated added, neatly printed labels. They said simply: "Marshal Pulsudski would have said kiss my arse!"

Such insolence had to be punished swiftly—more then 100 Polish youths and young adults had been arrested and shot, but all this time the Gestapo had felt deprived of the pleasure of seeing the real culprits punished. The Gestapo man in Rudy's apartment now had the uncanny feeling that at least one of the perperttrators was standing right in front of him.

One found, others would follow. For the Gestapo knew how to make even the most dedicated or defiant rebels "sing."

Snapping his fingers, the Gestapo man suddenly barked, "The cellar!" And head over heels the *Stapomen* raced downstairs.

Before long, shouts of delight came surging up. They had struck gold—Rudy's cache of self-inking stamps, stencils and fountain brushes, used by the Polish Underground's Boy Scouts in making the German a butt of Polish ridicule, and demolition materials used in sabotage training courses.

As cunningly constructed as the other two, the basement cache had been Rudy's pride. It had stood the test of periodic house-to-house searches—and most likely would have stood this one, were it not for his friend Zośka's telephone call the previous night. Caught in the midst of sorting things out, Rudy became too involved in the conversation to return to his task afterwards. And for this omission the young man now would have to pay dearly.

Bearing samples of their find, the *Stapomen* rushed back upstairs, dragged Rudy and his father down to the waiting cars, and took off into the

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darkness of the night like a whirlwind.

By a fortunate coincidence, Rudy's mother was out of town at the time, and his sister Dusia had been detained by friends past the curfew hour. Finding the line at home busy, she had called neighbors to leave word about where she was staying for the night. Thus, no sooner had the Gestapo left and the curfew was over than the neighbors' son raced to Dusia to tell her what had happened.

A seasoned conspirator herself, Dusia lost little time on despairing. The safety of others being foremost in her mind, she overtook Rudy's ally Zośka before he left for his daily duties to warn him.

Tadeusz Zawadzki, nicknamed Zośka, was commander of Warsaw Senior Scout Storm Troops—Special Forces of the Polish Underground. The onetime young Boy Scouts were now placed on full alert, their safe houses and mail drops cleared, and contact points changed. Then uneasy waiting began.

No other raids or arrests followed, but news of Rudy's arrest had a profound impact on the rank and file of the underground Scout movement. For Rudy meant too many things to too many Scouts for them to accept his arrest meekly. In their eyes, Rudy was not just a Scoutmaster, or commander. He was their friend, their brother, their mentor. Above all, he was a young man with a vision—a vision of a future Poland of young men of action, responsible citizenship and social justice for all.

From the earliest days of the underground activities, he had been the leader of the most enterprising chapter of the Organization of Petty Sabotage—WAWER—whose object it was to find ever new ways of waging a spirited war of wits with the German occupiers. Together with his closest friends from the 23rd Warsaw Scout Troop, Zośka and Alek Dawidowski, Rudy had developed a definite style. As commander of the Special Forces Scout Host Warsaw-South, codenamed SAD, Rudy had become a living symbol of things that mattered to Polish youth in general, to the underground Scouts in particular.

His arrest, therefore, came as a challenge not just to his fellow Scouts, but to the youth of Poland. What's more, it came to be seen as a challenge to Fighting Poland herself. If Fighting Poland was to retain its credibility as a genuine Resistance force, the challenge had to be taken up—Rudy must be snatched from the Gestapo's clutches. The problem was only that, for a rescue operation, clearance had to be obtained from the Directorate of Diversion, KHEDIVE, and the KHEDIVE's stand on these matters was well enough known—no diversion of men and resources from more important operations, and no outright confrontation with the German forces that could only lead to a vicious circle of terror and counterterror, with dire consequences for the entire nation.

The Scouts had a staunch friend in the KHEDIVE's chief of operations—if anyone, he most likely would be able to swing the KHEDIVE's opinion in their favor. Unfortunately, he was out of town.

Through a contact in the Pawiak Security Police prison, the Scouts were able to find out that Rudy had been taken for interrogation to the Gestapo headquarters on Szuch Avenue and most likely would be returning to Pawiak with the five o'clock prisoner transport.

The route of the Gestapo's Renault truck used to transfer prisoners between the prison and Szuch Avenue was known. Known also was the truck's license number, SS-72076. All that was needed for the ambush was a place where the truck would have to slow down or stop.

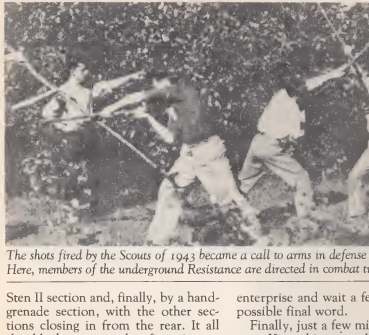
Pawiak prison was located within Warsaw's Jewish ghetto. Two blocks short of the ghetto's Nalewki Street gate, the truck would have to slow down in taking a sharp S-turn at the intersection of Bielańska, Długa and Nalewki Streets. The turn itself was in the line of fire of the ghetto guards, but the element of surprise and quick work by the Scouts would make the operation feasible.

With four assault sections concentrated on the last lap of the S-turn in Nalewski Street and spaced a few yards apart from each other, the ambushers could deliver four punches, each dealt progressively as the truck was turning into Nalewki Street.

The truck, having emerged from Bielańska Street to turn left into Długa, would be steering right again into Nalewki Street, only there to be met by four-man Molotov-cocktail section deployed on the corner of Nalewki and Długa Streets. Discharging their primitive, but highly effective incendiaries onto its hood and into the cab, they would have a good chance of bringing the truck to a stop right there without exposing the prisoners in the back to a furious exchange of fire.

Should they fail, the truck would next be met by a Sten-gun section that would spray the cab with fire at a right angle to the truck's movement, likewise sparing the prisoners in the back.

Should that fail also, the truck would then be met by the planned



The shots fired by the Scouts of 1943 became a call to arms in defense of the nation. Here, members of the underground Resistance are directed in combat training.

Sten II section and, finally, by a handgrenade section, with the other sections closing in from the rear. It all should take no more than five minutes.

Back-up security sections, meanwhile, would shut off the S-turn intersection from outside interference.

By three o'clock, everything had been worked out and the section leaders dismissed to familiarize their men with their respective tasks and to deploy them on time. But the KHEDIVE operations chief still could not be reached. Faithful to their internal discipline, the Scouts could only abort the operation at least for a day.

Another day came and went, then still another. But no word from the KHEDIVE was to be had.

In the meantime, Rudy was being methodically beaten to a pulp—reports of his treatment were raising the tension among the Scouts to a breaking point. Then, on Thursday, March 25, 1943, they learned their contact man finally was due back in Warsaw the next day, Friday.

On Friday, Rudy was taken to the Gestapo headquarters once again. And once again the Scouts had to wait. For now it became known that the long-awaited Major Kiwerski was not expected before late in the afternoon. Would there be enough time to obtain the necessary clearance and deploy for action once again?

When by 4:30 p.m. there still was no sign of Kiwerski, the situation became alarming. To abort the operation on Tuesday was one thing. To do it on Friday, after four precious days had been wasted, was quite another. The discipline that held the Scouts before might not hold this time.

Full of darkest forebodings, the chief conspirators departed for their command post. On the way, however, they were to stop at a small business enterprise and wait a few minutes for possible final word.

Finally, just a few minutes before 5 p.m., Kiwerski appeared. Already briefed, he went straight to the heart of the matter with a curt, "Whack them!" And his "Whack them!" was to become one of the most crucial events in the history of the Polish Underground. For it was a firm declaration of open war with the German terror machine.

Elated, a Scout leader stepped into a phone booth, dialed a number, and said: "Your offer sounds good. We'll take all you've got." Thus alerted, the Scouts at the far end deployed for their ambush, which would be the first open battle with the Gestapo to be fought in the streets of German-occupied Warsaw.

Then tense waiting began once again, only this time it was an entirely different kind of waiting—anxious waiting for a signal that would release a tightly wound spring.

Shortly after five, a report was received from the Gestapo headquarters—Rudy Bytnar and his escort had just left Szuch Avenue with the five o'clock transport.

At 5:30 sharp, a Scout lookout posted in front of the Bank of Poland on Bielańska Street doffed his cap to a passing girl. Posted half-way between the bank and the ambush site, another lookout did likewise. A Scout leader drew a whistle and blew.

Its high-pitched sound, breaking off practically in the same instant as it was given, caused no more than a momentary jarring in the ears of chance passers-by. Unfortunately, the signal also was heard by the trained ear of a Polish policeman who, for a while now, had been observing the odd group of young men with their bulging briefcases. At the sight of all four reaching for the clasps of their cases as they

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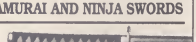

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stepped closer to the curb, the policeman snapped his holster open, drew his service pistol, and was about to close in upon the suspicious characters when, out of the corner of his eye, he saw Zoška rushing at him, pistol drawn.

Two shots rang out. The bluecoat slumped to the ground, and Zoška spun around to join battle with the real enemy.

Brief as the incident might have been, it did not escape the attention of the Gestapo truck's driver. Already in the process of turning into Nalewki Street, he swerved sharply back into Dluga and stepped on the gas.

Momentarily stunned, one of the ambushers leaped after the receding hood and lobbed a Molotov cocktail on it. His men followed.

The cab on fire, the truck veered toward the sidewalk.

The driver slammed on the brakes, but before he could leap from the burning cab, he collapsed upon the steering wheel.

His two escorts, sitting with him in the front, managed to tumble out. Their uniforms on fire, but their automatic pistols blazing, they were cut down by Sten I section and the detachment blocking access to the ghetto.

In the meantime, however, the swerving of the truck brought both Sten sections that were rushing after it into the line of fire from the guards posted at the tailgate.

The Scouts dived for cover into the arcade of the old Royal Arsenal that now housed the archives of the City of Warsaw. They dropped to the ground and aimed their own fire at an angle sharp enough for their shots to spare the prisoners.

At this point, they were joined by Zoška. The young man regrouped them, fanned them out, and led them forward with a shout.

At the sight of the charge, one guard leaped from the truck. He ran straight into the arms of the back-up detail called Security-Ghetto. The other one froze and, by the time the tailgate was reached and lowered, he tumbled down dead.

The time was just past 5:35 p.m. when a shout of triumph went up. The Scout's Operation MEXICO was practically over.

In the course of the operation, however, one of Rudy's friends in the Sten II section had been hit in the stomach. On the retreat toward Krasiński Square, another young Resistance fighter, Rudy's close friend Alek Dawidowski, was wounded also. And Rudy's condition was beyond repair. He died a few days later. His two compatriots followed him.

On the morning following the Operation MEXICO, 140 Poles were shot by the Germans in reprisal. To all appearances, the operation had been ill-advised, but soon the story of Rudy, Zoška and their closest friends from the 23rd Warsaw Scout Troop came off an underground press. Its author was Aleksander Kamiński, former Camp Chief of the Scoutmaster Training Center at Big Little Mountains and now Editor-in-Chief of the official publication of the Home Army's High Command, *Biuletyn Informacyjny*. Its title, *Stones Cast by God's Hand Onto the Ramparts*, was taken from Juliusz Slowacki's poem *My Testament*, which at Rudy's express wish, was recited by his friends a short time before his death. Read and memorized as the most sacred heritage of contemporary Polish youth, it became a living epic for the oppressed Polish people.

Echoing the shots fired by officer cadets of 1830 in storming that very same Arsenal and thus starting the November Insurrection against the Russian masters of Poland, the shots fired by the Scouts of 1943, became a call to arms in defense of the nation's freedom and dignity. Within a year, by German accounts, armed assaults on the German military, administrative and economic establishment in Poland were occurring at the rate of one every six minutes.

In the continuing struggle for freedom, the Polish Scouts continued to play a prominent role, becoming the choicest troops of the High Command of the Polish Home Army. Before long, the Scout Special Force Jerzy became Storm Battalion zoška, composed almost entirely of officer cadets and trained in the Scouts' own officer-training center. From the Zoška Battalion then came the Special Disposition Force AGAT—an acronym for Anti-Gestapo. Growing by leaps and bounds, AGAT in turn became full-strength battalion specializing in "show" battles staged in the very heart of the German police and administrative districts.

In the spring of 1944, AGAT began its reorganization into the first Scout paratroop battalion in history, Parasol. Trained in its own camp in Siedlce Woods, it became a standing reserve at home for the Polish Parachute Brigade in England that, at the moment of uprising, was supposed to be dispatched to Poland.

The brigade never arrived, but in the Warsaw Uprising of 1944, the High Command's Scout battalions Zoška, Parasol and Wigry, and its Staff Regiment BASTION, built on a Scout nucleus, repeatedly proved their worth as the finest of Freedom Fighters. □

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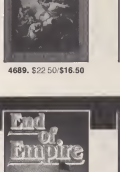

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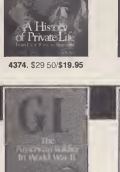

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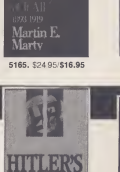

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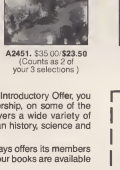

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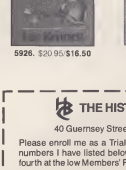

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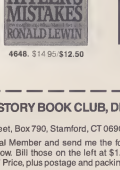

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Fateful Pathway Clearly Marked

Totally unprepared, swollen with refugees from the east, the German city of Dresden went through a fire storm that tore roofs off buildings and leveled 1,600 acres. Still controversial, the air raid climaxed internal Allied debate over the goals of strategic bombing.

By Wayne M. Dzwonchyk

Tuesday, February 13, 1945, was *Fasching*, the traditional Carnival Night in Germany. There was, however, little merriment in the city of Dresden. The ancient capital of the German-Polish kingdom of Saxony, renowned for its porcelains, its baroque palaces and its art collections, had so far escaped significant damage, but the war crept inexorably closer every day.

The city held little of military significance, except its railroad yard, which had already been hit twice in recent weeks by small-scale American air raids.

Just 70 miles to the east, though, German forces reeled under heavy Soviet attack—the city's normal peacetime population of perhaps 630,000 had been swollen to more than a million by the flood of refugees. Public buildings such as schools had been turned into temporary hospitals to handle the burgeoning number of sick and wounded. Exhausted and frightened masses of people, mostly women, the young and the elderly, choked the roads and railroads. Many of the refugees from the east had never heard an air raid siren.

Eva Beyer, 17, lived and worked in the Junghans bakery, some distance from the *Altstadt*, the old center of the city on the Elbe River. For two months she had spent all her spare time working for the German Red Cross at the *Hauptbahnhof*, Dresden's main railroad station, meeting the packed refugee trains from Silesia and the Wartegau. Yet the daily round of ministering to the wounded and hungry, the babies dying for lack of milk, or the children separated from their parents and siblings, had not prepared her for the horrors that lay ahead.

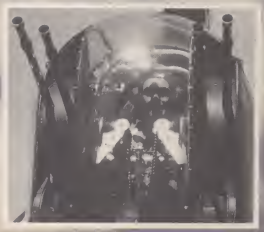
Due to awaken at 3:30 a.m. to begin delivering bread, she could not sleep that evening, a fact she later attributed to a premonition. During a trip to the bathroom at about 10 p.m., she saw a strange green glow in the sky. Mesmerized, she took a moment to realize that the light came from what the Germans called a "Christmas tree," the Primary Green flare dropped by a pathfinder force of Royal Air Force bombers to illuminate their target—in this case, Dresden. By the time she had run through the house spreading the alarm the bombs were beginning.

That night, two waves of RAF bombers, nearly 800 planes in all, dropped more than 2,500 tons of bombs, mostly incendiaries, on what was once described as a city of perfect architectural harmony. The following day, U.S. Army Air Force bombers stirred the rubble with hundreds of tons of high explosives. A devastating fire storm obliterated much of Dresden, including the historic *Altstadt*, where Eva Beyer's mother lived.

The air raid that destroyed Dresden marked the culmination of a long debate within the Allied High Command about the uses of air power. The fires of Dresden also sparked a renewed discussion about the morality of strategic bombing that has continued since the war.

The Royal Air Force, established partly in response to German air raids against London that killed 1,500 persons in the latter stages of World War I, ardently favored strategic bombing from the very beginning. British airpower theorists, building on the ideas expressed in Italian General Giulio Douhet's 1921 book, *Command of the Air*, vastly overstated the capabilities of air power. Air attacks on civilian populations would, they believed, destroy enemy morale and win wars without resort to costly ground campaigns. Firmly convinced that there was no defense against air attack, because "the bomber will always get through," they expected enemy air forces to inflict massive civilian casualties on Britain in the next war, and dreamed of retaliating in kind. Air Chief Marshall Arthur "Boom" Trenchard, first chief of the RAF and an influential figure throughout the interwar period, became a leading spokesman for attacks against cities as the quickest route to victory. Ironically, for all the saber-rattling, the RAF's means lagged far behind its intentions.

The exaggeration of strategic bombing's potential led to an overestimation of German air power, a factor contributing to Britain's policy of appeasement in the late 1930s. Continued fear of German retaliation after the war began in 1939 meant that early RAF raids against Germany dropped mostly leaflets instead of bombs. Early attempts at daylight raids against military and economic targets



Two waves of RAF Lancaster bombers struck Dresden, Germany, with a total of 1477.7 tons of high explosives and 1181.6 tons of incendiaries, creating a maelstrom of fire and death. INSET: An alert Allied gunner in a bomber scans the sky for German Luftwaffe fighter aircraft. By 1945, the Allies basically dominated the Reich's airspace.

Three hundred B-17 Flying Fortresses, part of a force of 1,300 U.S. Eighth Air Force bombers and 900 Thunderbolt and Mustang fighters, took off after 7 a.m.—as a popular song went: "The USA by day, the RAF by night."

brought disastrous casualties—and led to a decision to carry out bombing attacks mostly at night.

When Winston Churchill became Prime Minister on the eve of the fall of France, air-power advocates gained a powerful friend who demanded action. RAF Bomber Command began to make frequent raids against the industrial Ruhr and Berlin.

German theorists, for their part, had not entirely overlooked strategic air power, but the *Luftwaffe* was organized primarily to support the campaigns of the German Army. When the Nazis undertook their air campaign against Britain in late summer and fall of 1940, the *Luftwaffe* proved unequal to the task. Even the worst raids during the Battle of Britain, such as the destruction of Coventry, inflicted only moderate casualties, but the desire to strike back reinforced Bomber Command's predilection for bombing enemy population centers, rather than industrial or transportation targets.

With the increasing sophistication of German air defenses, Bomber Command's casualty rate continued to climb, while the raids on economic targets seemed to have no discernible effect on the Nazi war machine. At the instigation of his scientific adviser, Lord Cherwell, Churchill ordered a study of the effectiveness of the bombing campaign, utilizing newly developed photo-reconnaissance techniques. The report demonstrated, to the chagrin of all, that the bombs often fell miles from their intended targets, leaving supposedly destroyed factories unscathed.

Bomber Command went back to the drawing board, under a new commander, Air Marshal Sir Arthur Harris. "Bomber" Harris was driving, courageous, politically savvy, and a disciple of Trenchard and Douhet.

When Harris took over in early 1942, Bomber Command was down to less than 400 serviceable aircraft, of which only about 70 were four-engine, heavy bombers. It took him more than a year to get the strategic force back on its feet.

Harris dismissed proposals to concentrate air attacks against critical components of the enemy economy as hopelessly unrealistic "panaceas." Daylight bombing of pinpoint targets required air superiority, long-range fighter escort, and higher levels of training and accuracy than Bomber Command seemed capable of achieving. Attacks on the German civilian population, euphemistically termed "area bombing," on the other hand, had the advantage of being well within the existing capabilities of Bomber Command. Bolstered by another study from Cherwell, suggesting that the "dehousing" of German workers might crack Nazi morale and wreck the German war effort, British policy officially shifted to "area bombing." Harris developed a list of 60-odd German cities and began to check them off, one by one.

Bomber Command scored its first big success in city-busting at Hamburg in July 1943. Massive and concentrated incendiary bombing, coupled with tightly clustered buildings and ideal atmospheric conditions, initiated the first known fire storm, one that sucks people and debris into 800-degree (centigrade) flames with the force of a tornado. The city was destroyed, with 48,000 persons left dead.

Subsequent efforts to repeat that feat on a similar scale failed until Dresden. The "Battle of Berlin" (November 1943-March 1944), a series of attempts to blot out the Nazi capital, cost nearly 500 RAF bombers and left Berlin battered but still functioning.

The U.S. Army Air Force arrived in the European Theater firmly wedded to daylight precision bombing of critical elements of the German war economy—oil plants, ball-bearing and aircraft-engine production, and railroad and canal facilities. Early raids, like the one against the Schweinfurt ball-bearing factory and the Rumanian oil plants around Ploesti, racked up huge losses in planes and made hardly a dent in German industrial capacity. The Eighth Air Force learned the same expensive lesson Bomber Command was learning, a lesson as old as the art of war: the first objective of a military campaign is to attack and destroy the enemy's main force. In air war, this meant air superiority was an indispensable prerequisite to a really effective strategic bombing campaign.

Gaining superiority over the *Lufwaffe* required a grinding campaign of attrition in the air, along with destruction of its major sources of fuel supply on the ground. Despite the intense efforts against German aircraft manufacturing, production of new German planes continued to increase until the final months of the war. The destruction of trained aircrews eventually turned the trick, however. By spring of 1944, Allied daylight air superiority over western Europe lay within reach, as the unhampered Allied air support for the Normandy landings demonstrated. At the same time, a combination of tactical and technical innovations—flying in "boxes" formation, heavier armament for bombers, capture of airfields on the Continent, the Norden bombsight, and the development of powerful, long-range fighters with drop tanks, like the P-51b Mustang, made it possible for American bombers to penetrate to Berlin and beyond in daylight, to deliver increasingly effective strikes with acceptable losses. The seeming vindication of American ideas even won over Air Chief Marshal Sir Charles Portal. After the release of the strategic bombers from direct support of the Normandy campaign in September 1944, new directives from the Combined Chiefs of Staff gave attacks on the German petroleum industry top priority, with second priority going to attacks on the German transportation system. Despite this clearcut directive, debate and dissension over the proper uses of strategic air power resumed and reached new heights of bitterness by January 1945, especially within the high command of the RAF.

The Americans applauded the attack on oil, which they had advocated from the beginning. The Eighth Air Force had been carrying on an increasingly effective campaign against that target system since March 1944. Air Marshall Expeditionary Forces—and SHAEF Commander Dwight D. Eisenhower's chief air officer—took a broader view. Arguing that modern war was a combined operations in the widest sense, he pointed out that destroying the enemy by invasion and destroying his ability to resist by wrecking his rear areas from the air were really two sides of the same coin. Air attacks against industrial and political targets in Germany, Tedder felt, should be coordinated with land attacks, in one comprehensive offensive plan, instead of fitting together haphazardly like a "patchwork quilt."

There was little disagreement between Tedder and Chief of Air Staff Portal, given the growing abundance of Allied air resources, but still no compromise was possible—the patchwork quilt prevailed. Bomber Harris remained the stumbling block. Convinced to the end that his city-busting would ultimately crush German morale and hasten victory, he continued to reject alternatives. Even while Bomber Command was committed to support the Normandy lodgement, he had managed to maintain a destruction rate of 2½ cities per month. Thus, for the last months of 1944, he devoted more than half of Bomber Command's resources to attacks on cities, while railroads and canals, oil targets and military targets got only 15 percent each.

Even at that rate, German oil supplies had become critically short by the turn of the year, thanks in part to continued American attacks. Nevertheless, by January 1945, Portal and Harris were so bitterly at odds that Harris offered to resign. At this, Portal drew back. Harris was so well-known with the general public, which had little understanding of the issues involved, that he could not be sacrificed, especially with no one of equal stature to take his place.

Portal had never questioned the morality of Harris's approach, only its effectiveness. In fact, Portal himself had proposed, in the fall of 1944, a massive Anglo-American round-the-clock attack on Berlin. The proposed operation, code-named THUNDERCLAP, was supposed to crack German morale and lead to a quick surrender.

TOP: (Left to right): General Dwight D. Eisenhower, Air Marshal Arthur Tedder, General Harold Alexander and Admiral Andrew Cunningham meet. Tedder advocated intense bombing of Germany. ABOVE: As dusk falls, these British Royal Air Force Lancaster bombers sit silently parked as their pilots await the signal to start the engines.

General Carl Spaatz, commander of U.S. Strategic Air Forces Europe, rejected THUNDERCLAP, partly because of a shortage of fighters, but also because he was opposed to the entire concept of bombing cities.

In actual operations, however, the distinctions between British and American bombing were blurred. Often bombing by radar in poor weather conditions, the Americans in the last months of 1944 dropped fewer than one third of their bombs within 1,000 yards of the intended targets. Moreover, the Allied setback in the Ardennes (Battle of the Bulge) brought intense, high-level pressure on Spaatz for some spectacular, decisive operations. As a result, he sanctioned the destructive attack mounted against Berlin with nearly 1,000 bombers on February 3, 1945.

Thus, the inability of the RAF's high command to control "Bomber" Harris, together with Allied frustrations over the postponement of final victory, helped set the stage for the destruction of Dresden. Coalition diplomacy now would play the key role in events leading to the final, fateful decision.

German home defense Freya radar towers, searchlights stabbing the night sky, antiaircraft flak and Nazi aircraft all combined to take a toll of Allied raiders.

The Soviets had advanced to mid-January the scheduled start of their final massive offensive against Germany, partly in response to ill-considered pleas from Churchill to relieve German pressure in the Ardennes. The Russians had asked the Anglo-Americans to bomb the major railroad junctions and marshaling yards of Berlin and Leipzig to help delay German reaction to the offensive. Churchill's reaction to the request gives a clue to how much he was already thinking about postwar relations with his erstwhile allies. He and U.S. President Franklin Delano Roosevelt were shortly scheduled to meet with Stalin at Yalta to discuss arrangements for the postwar treatment of the defeated Axis. Massive Anglo-American bombing of German cities behind the Eastern Front would not only make up for lack of military progress since the German Ardennes offensive, but would also provide the Soviets with a sobering demonstration of the might of Allied air power and, perhaps, even slow their advance into the heart of Germany.

Allied planners had resurrected THUNDERCLAP as a possible mission in January to coincide with the opening of the Soviet offensive, with a view to furthering the chaos behind German lines in the east by bombing areas already in turmoil because of the influx of refugees. Churchill spoke to Air Minister Sir Archibald Sinclair on January 25 about "blasting the Germans in their retreat from Breslau," and reminded him the next day that Berlin and other large cities in eastern Germany should now be "attractive targets." On January 27, Harris authorized attacks on Berlin, Magdeburg, Leipzig, Chemnitz and Dresden, to spread confusion among the "evacuees from the east." Dresden thus became a target. Ironically, weather conditions prevented carrying out the raids until February 13, after the Yalta Conference was over. Further, the RAF long since had warned that cities of over 100,000 population would be targets.

Bomber Command crews were not enthusiastic about this target. They knew little about the city or its air defenses. Some found their preflight briefings, which spoke of "panic raids" designed to sow chaos among the masses of refugees, disturbing, but most thought only about the chances of making the 1,600-mile, 9-hour round-trip safely.

The strength of German antiaircraft may have been unknown, but the execution of the attack was distinctly routine. The Bomber Command crews carried out the raid with the lock-step techniques and precise division of labor developed by Bomber Command in three years of operations against German cities.

Two waves of RAF Lancaster bombers, big, ungainly, four-engined heavies, hit the city with a total of 1,477.7 tons of high explosives and 1,181.6 tons of incendiaries.

Wing Commander Maurice Smith controlled the first wave, #5 Group, 244 planes. He later recalled that his preflight briefing gave him the impression the operation was of special interest to the Prime Minister. A veteran of 32 missions, including 10 as a Master Bomber, Smith led a marker force of eight twin-engined Mosquito medium bombers, guided to the target by intersecting radio beams.

Smith rendezvoused with a pathfinder force of Lancasters, guided by radar, just before 10 p.m. The heavy cloud cover that had predominated for most of the flight across Germany gave way to patchy clouds as the marker force reached Dresden. With the target area lighted by the Primary Green and illumination flares dropped by the pathfinder force, the marker force swooped in low to set afire the aiming point, a stadium just outside the city to the northwest, with red incendiaries. The view of the city from 2,500 feet at the start of the raid reminded Wing Commander Smith of a model railroad. The main force of Lancasters aimed its bombs to land past the aiming point, in the heavily built-up area of the *Altstadt*.

There was little flak over the city. Most of the 88mm

FICTIONAL ESCAPE FROM DRESDEN

It took two decades for American novelist Kurt Vonnegut, Jr. to react—in writing—to his searing experience as a prisoner of war caught in the bombing of Dresden. What he did then (1969) was to combine a fictional "real" story with an escapist fantasy as his widely acclaimed and best-selling novel *Slaughterhouse-Five.*

The "real" story, very much like his own, told the story of American GI Billy Pilgrim, captured during the Battle of the Bulge after becoming lost behind German lines. Frostbitten, in shock and "out-of-touch" with reality already, Pilgrim then witnesses the bombing, the firestorm, the devastation, the cleaning-up, and all the associated horrors of Germany's Dresden.

Many ask: was attack necessary?

As a result, Pilgrim later cannot forget, and is close to a mental crackup. He then, in surrealistic, dreamlike episode, "escapes" to a mythical planet called Tralfamadore.

There, past and present are all mixed up—perhaps he's *always* been there. When memories of Dresden reappear, he resorts to his oddly timeless interludes on Tralfamadore . . . to escape that long shadow in his real life, the bombing of Dresden.

Vonnegut's Dresden experiences are mirrored by the misadventures of Billy Pilgrim and his associates. Conditions were so bad in Germany by this time, and rations so short, that this group of POWs might have starved had they not been put to work in a factory that produced a special highly concentrated malt syrup, distributed only to pregnant and nursing mothers and small children. By surreptitiously spooning the vitamin-packed syrup, the POWs were able to stave off hunger. Ironically, this meant they were better nourished than many of their captors.

The Germans had organized units in the Waffen SS from turncoats of

antiaircraft guns assigned to the defense of Dresden had been pulled out and sent to the Eastern Front, for use against the Russians. While the Lancasters dropped their payloads, Smith circled the target area, encouraging them and correcting their aim. The bomb aimers in the last of the 244 planes in the first wave had great difficulty distinguishing the aiming point from the rest of the spreading sea of flames below.

At 10:25 p.m., Wing Commander Smith ordered the signal: "Target attacked successfully. Primary plan through cloud." The Lancasters turned for home. The first wave had lasted approximately 17 minutes. Half the houses in the *Altstadt* were ablaze, and the air was beginning to heat up above the city. Despite the devastation, people in many areas of the city emerged to fight the flames as the last of the bombers roared off. Meanwhile, the second wave of bombers was on its way.

The second wave, 538 planes, had no trouble finding the target, as the rosy glow of the flames could be seen from more than 100 miles away at 20,000 feet. Ray Akehurst, a wireless operator aboard a Lancaster of 75 (New Zealand) Squadron, RAF, recalled, "We seemed to fly for hours over a sheet of flame." By the time the last planes made their bomb runs, turbulence caused by updrafts from the spreading flames made it difficult to control the aircraft. Within an hour after the end of the second-wave attack, the spreading fires raged out of control, merging into howling, high-velocity jets of flame, like the fire storm that had destroyed Hamburg.

Temperatures in the center of the *Altstadt* reached 1,200 to 3,000 degrees centigrade. Suction created by the fire storm tore the roofs off buildings and sucked objects and people into the flames. The shells of buildings acted as furnaces, belching superheated flames skyward. People seeking shelter in cellars suffocated for lack of oxygen. The copper roof of the Zwinger Palace melted and ran into the ground, and the sandstone Frauenkirche collapsed from heat damage. The city would burn for a week. More than 1,600 acres, virtually all of old Dresden, were reduced to piles of rubble, craters, ashes and jagged, ruined walls.

Dresden was the ancient capital of the German-Polish kingdom of Saxony. A city of little military value, its railroad yard had already been hit; more was in store.

The exceptional destructiveness of the raid was equally attributable to weak defenses and to Dresden's lack of preparation for a serious air raid. In addition to the absent heavy flak guns, German night fighters based nearby sat impotent on the ground due to lack of fuel.

The wood-frame construction and closely packed buildings of the *Altstadt* contributed to the toll. In all Dresden there was only one real reinforced-concrete air raid shelter, reserved for the *Gauleiter* (local leader). The city had acted as a magnet for refugees because many Germans were convinced the Allies would never destroy its priceless art collections and architecture. Rumors also circulated among refugees that the city was being spared because a relative of Churchill lived there. After the disaster of Hamburg, residents of Dresden had been instructed to clear the top stories of their buildings of flammable materials and to stockpile sandbags and fire-fighting equipment. Knockouts were constructed in cellar walls beneath contiguous houses, linking entire blocks, so that people trapped under a collapsed building could escape into the adjoining cellars, but in the fire storm, these escape routes sometimes became death traps.

Survival was a lottery that night. Gisela-Alexandra Moeltgen abandoned her hard-won seat on the Thuringen Express, which was awaiting departure at the *Hauptbahnhof* when the raid began. Ignoring policemen who were directing crowds into the railroad station, she and her husband Hans took shelter in the basement of the Technical High School nearby. More than 3,000 dead were later found at the railroad station. The Moeltgens fled the Technical High School when a direct hit threatened to collapse that building. The entire area was in flames.

almost every nationality in Europe. At this time they were attempting to create a unit of renegade Americans, to be called the "American Free Corps." Vonnegut, like Pilgrim and his fellow GIs, was subjected to a recruiting harangue by the commander of his ill-fated organization, one Howard W. Campbell, Jr., resplendent in a unique Americanized version of the SS uniform, in red, white and blue, complete with ten-gallon hat and black cowboy boots trimmed with swastikas. His offers of improved rations and snappy uniforms in return for participation in the great anti-Bolshevik crusade elicited little response from the apathetic POWs, except for one American, an ex-school teacher who denounced Campbell as a man "lower than a snake . . . lower than a bloodsucking tick."

Like Vonnegut, Pilgrim and company emerge from the shelter of the municipal slaughterhouse to work in the Dresden "corpse mines," extracting the bodies of those who had suffocated in their cellars while the buildings burned above them.

World War II spawned fewer antiwar novels than World War I, probably because the stark alternative posed by possible Axis victory seemed clear to most people. Vonnegut's work is perhaps best compared to Joseph Heller's *Catch-22*, which also deals with the air war, from the perspective of the air crews. Although the Nazis were evil, it was far from clear to either Vonnegut or Heller that the Allies had a monopoly on good. Both books are outcries by sensitive artistic temperaments, using black humor to attack the inhuman, mechanical bureaucratized character of military life, and the irrational, arbitrary and capricious organized insanity of modern total war. Both books inspired commercially successful motion pictures during the period of growing American disenchantment with the spectacle of the war in Vietnam.

The results of the firebombing raid on Dresden: After the war, the East Germans estimated 25,000 dead and 35,000 missing. Here, hastily mobilized German rescue crews search among the rubble for the living.

They retreated to their flat near Grosser Garten, but that was hit and set afire by the second wave. Hans placed Gisela-Alexandra, a semi-invalid, and their son Franck in a handcart, covered them with a wet bedsheet, and headed toward the outskirts of the city, through spark-whipped streets, past scenes of desolation. They finally reached Nothitz, south of the city, on the morning of the 14th, pitch black with soot, but safe.

Young Eva Beyer dashed from her cellar retreat to the fifth floor of the bakery building to help sandbag and extinguish three small incendiaries that had pierced the roof. She was still helping to clear up the mess when the second bomber wave hit. A huge hole was blown in one of the walls, and part of the house was set on fire. A bomb blast nearly sent Eva out the window, but she escaped with bruises and a black eye. After taking the baker's children out of Dresden to safety, she returned to the *Altstadt* to look for her mother and her four-year-old sister at the house in Klein Plauensche Gasse. The entire area was nothing but a wasteland of carbonized shells. Eva searched desperately for months for any word of her mother's fate. She had miraculously escaped, but it was not until August 1945 that they were reunited.

Most of Dresden's famous old buildings were hit—the Schloss, the Zwinger, the Frauenkirche. The zoo was destroyed, and the elephants, hippos and polar bears perished, while other wild animals, including buffalo and great apes, escaped, appearing occasionally in the city and surrounding areas in subsequent weeks, to terrify shell-shocked survivors.

Many Allied POWs in the area involuntarily witnessed the air raid and its effects. Jack Myers, a British veteran of Dunkirk, Greece and Crete, captured in 1942 in the Western Desert, had been evacuated from a *Stalag* near Breslau. Imprisoned in a cattle car sitting in the railroad yards near the *Hauptbahnhoff*, with some 80 other POWs of various nationalities, he had not been fed in five days. Myers witnessed the burning of the city after a bomb derailed the car, setting the POWs free. Suffering from a frostbitten foot, he had not strayed far before he was rounded up, and eventually fed. Convinced that he would have starved to death but for the raid, he attributed his survival to the providential bomb. Writing in 1967, he expressed no sympathy for the victims of the raid. "It gave great pleasure to a group of POWs . . . Good luck to the raiders . . ." Myers said.

While Dresden burned, American aircrews at bases in England ate their pre-dawn breakfasts of bacon and eggs. Three hundred B-17 Flying Fortresses, part of a force of 1,300 U.S. Eighth Air Force bombers and 900 Thunderbolt and Mustang fighters scheduled to attack targets deep in Germany that day, took off after 7 a.m., arriving over the burning city shortly after noon. Their target was the railroad marshaling yards, with the bombing to be directed by radar.

Some Dresden survivors could not recall the American air raid. Either many bombs fell wide of their targets, into areas already wiped out, or the chaos in the city at that time was so great that the attack went unnoticed. Others, however, clearly remembered the Mustangs roaring over at treetop level to strafe any exposed group of people.

Estimates of the total number of dead from the combined RAF and U.S. attacks ranged up to 200,000, and Nazi propaganda was not slow to label the raids as barbarous. British historian David Irving, in a controversial 1963 book entitled *The Destruction of Dresden*, opted for a casualty figure of 135,000, which he compared with the 72,000 at Hiroshima. In 1966, he retracted this figure, reporting that the best information available from East German sources cited 25,000 dead and 35,000 missing, a toll on roughly the same scale as Hamburg. Nevertheless, to those who were there, the Dresden raid was sufficiently appalling.

Rescue and cleanup efforts were a daunting task. Hans

Voigt, a Dresden schoolmaster, was placed in charge of the emergency *Abteilung Tote.* POWs were pressed into service to help in the effort. One of them was a member of the U.S. 106th Infantry Division, captured during the German Ardennes offensive, named Kurt Vonnegut. Vonnegut and his comrades had survived because they had taken shelter in the underground meat locker of the Dresden municipal slaughterhouse. They were put to work extracting corpses from the ruins. His experience later led to the Vonnegut novel *Slaughterhouse-Five.*

Workers poking through the rubble encountered every kind of horror. Some bodies seemed perfectly unharmed, while others were reduced to a pile of ashes. Many had simply disappeared. The distinctive smell of death hung over the city for months. At first the dead were taken in carts for burial outside the city, but this expedient proved ineffective. To prevent typhus and other epidemics, the authorities finally resorted to cremation of thousands of victims on 25-foot grills set up in the center of the city.

Reaction to the severity of the raid was almost immediate on both sides. Many Americans and Britons realized for the first time that Allied bombing was often directed at population centers rather than military or industrial targets. This realization was brought about by an unusual SHAEF press conference on February 16, at which an RAF officer erroneously reported that the Allies had now officially adopted a policy of deliberate terror-bombing of German population centers. Actually, the decision was not a new one. The report was suppressed in Britain, but the Associated Press wires carried it in the United States.

As a result, questions were raised in Parliament, and Churchill seems to have had second thoughts. He dispatched a scathing memorandum to "Bomber" Harris on March 28, asking if the continued "terror" bombing of German cities was any longer in British interest, since the Allies might soon find themselves in occupation of "an utterly ruined land," where they might have to provide for the Germans as well as themselves. The memo so outraged Portal and Harris that Churchill was forced to withdraw and redraft it. On April 16, the Anglo-American bombing offensive officially ended, with the U.S. and Soviet forces converging and no targets left.

Did the raid have any effect on the course of the war? Militarily, it is doubtful. The railroads, the only meaningful targets in Dresden, were working again within days. The raid did strike a crushing blow against the morale of the people of the city, but they played little role in the war at that stage.

Although subsequently overshadowed by Tokyo, Hiroshima and Nagasaki, Dresden has remained a watchword for the mindless inhumanity of modern total war—and a perennial source of controversy. The U.S. Strategic Bombing Survey, an exhaustive study of the effects of aerial bombardment in World War II, suggested that long-range bombing of population centers would destroy an enemy's war-making capacity and break his will to resist only if it was so intensive, so concentrated and so destructive as to be repugnant to the instigator's own people. Air Marshal Tedder was probably right in saying that the Allied strategic bombing campaign was most effective when it was synchronized with the ground campaign. □

A professional historian with the U.S. Army's Military History Center, Wayne M. Dzwonchyk specializes in American military and diplomatic history of the World War II period and beyond. Recommended as further readings: Under the Bombs: The German Home Front, 1942-1945, *by Earl R. Beck, and* Slaughterhouse-Five *by Kurt Vonnegut, Jr.*

TOP: Dresden, more than most of the cities of the Third Reich, was laid utterly to waste. In Franklin Roosevelt's words, "Hitler's Fortress Europe doesn't have a roof" against Allied bombs. ABOVE: In 1939, Reichsmarschall *Hermann Göring had boasted that Allied bombs would never fall on Germany. He was wrong, and here he removes his famous medals in captivity after the war.*

As the crucial El Alamein campaign opened late in 1942, it was a fact of life for the Germans that all of their supplies must be either flown in or shipped to North Africa.

Early Decision In The Desert

The Battle of El Alamein, which "made" Montgomery's reputation, really was a series of desert contests in which another British general, Sir Claude J. E. Auchinleck, earned a decisive early victory setting the stage for "Monty's" later encounter with Erwin Rommel and his *Afrika Korps.*

By Raymond Callahan

Rommel, Rommel, Rommel, Rommel! What else matters but beating him?" Winston Churchill, declaiming this remarkable tribute to the German field marshal as he strode up and down his bedroom at the British Embassy in Cairo in August 1942, catches almost too neatly how crucial the struggle against the Desert Fox had become for him. Nor was it the first tribute Churchill had paid Rommel. In January 1942, to the outrage of some, the Prime Minister had told the House of Commons that Rommel was "a great general."

In August of 1942, however, Churchill did more than orate about Rommel. He completely restructured the British High Command in the Middle East. Within three months, the general he then chose (and it was a second choice) as the new commander of the battered Eighth Army, Lt. Gen. Bernard Law Montgomery, had defeated Rommel and launched himself into the military stratosphere. All that "Monty" subsequently achieved—a field marshal's baton, the professional leadership of the British Army and fame as the best-known British soldier of his generation—rested on the foundation of his victory at El Alamein. How does that victory look after 45 years?

The desert war had attained such significance by August 1942 that Churchill was convinced the fate of his government would be determined by the next round in that contest. The significance, however, had come about gradually, almost accidentally. When the fall of France (1940) sent shock waves through London, a proposal was advanced by staff planners to abandon the Mediterranean, holding only Gibraltar and blocking the Suez Canal. The formidable commander of the Mediterranean fleet, Admiral Sir Andrew Brown Cunningham, protested vigorously. To pull the fleet out would lead to a "landslide in territory and prestige."

Churchill also was adamantly opposed. To abandon the Mediterranean on the heels of expulsion from Europe would put Britain's oil supplies at risk. Perhaps more important, it would signal to enemies and neutrals, as well as to allies and the British public, that the British government felt itself beaten. That was not a signal Churchill intended ever to send. So the British remained—and at the end of 1940 won their first victory on land against an Axis power—Italy—in Egypt's "Western Desert."

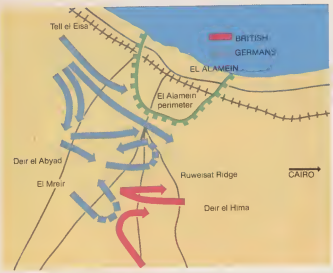
The great success was won under the overall direction of the theater commander, the taciturn, one-eyed General Sir Archibald Wavell, and in the field by Lt. Gen. Sir Richard O'Connor's Western Desert Force—against the least formidable of the Axis partners, to be sure. It was, in fact, something of a mismatch. The Italians, who had advanced 60 miles into Egypt in September before digging themselves into a series of fortified camps, do not deserve all the jibes made about them. It is true, however, that in doctrine, training, equipment and leadership they were unprepared for a war of rapid maneuver.

O'Connor had launched Operation COMPASS with two splendid regular units: the 7th Armoured Division, formed and trained in Egypt before the war by Maj. Gen. P. C. Hobart, one of Britain's "apostles of mobility," and the 4th Indian Division, which would compile one of the finest formation records of the war.

O'Connor's victory at Sidi Barrani was followed by a three-month campaign, a miracle of logistic improvisation as well as a demonstration of operational skill, that virtually eradicated the Italian forces in Libya (the British took 130,000 prisoners while losing less than 1,000 dead). A lively argument has been conducted over the last 40 years about what happened next. Wavell's advance halted in February at Agheila. Troops had to be pulled out of the desert and sent to redeem Britain's pledge to support Greece. Could O'Connor have pushed on another 400 miles to Tripoli, the last Italian bastion, and ended the North African campaign then and there?

Many have argued that the answer is a resounding "yes." O'Connor's chief of staff, Brigadier John Harding (himself a future field marshal) felt in restrospect, however, that logistics precluded further advance in strength.

In any case, Tripoli remained untaken. In February 1941 a German "blocking force" began to disembark there, commanded by a tough, stocky, ambitious, much-decorated infantryman of World War I who in 1940 had



TOP: Beginning in July 1942, Rommel's Axis forces first clashed with British Commonwealth troops outside El Alamein (as seen here). MIDDLE: After a succession of Commanders for the British Eighth Army in the desert, Churchill (left, talking to troops there) at last had a man he thought would prove equal to Rommel—Montgomery. ABOVE: Attack! Montgomery's valued Australian forces, hidden by the dense smoke screen at right, launch their determined assault against the Germans with both bullet and bayonet.

turned himself into a panzer division commander: Erwin Johannes Rommel.

Hitler had never intended to fight a major campaign in North Africa. He realized, however, that Mussolini's African empire could not be allowed simply to collapse. Rommel was to save Tripoli and perhaps to reclaim some lost ground. What he did, characteristically, was to ignore orders, reconquer all of Libya—and erase totally one division from the British order of battle. It also was characteristic that the British facilitated the process.

When Rommel opened his attack in late March, O'Connor and his veteran division were no longer in the desert. A newly arrived, raw, poorly equipped armored division was broken up and brushed aside. Clumsy British command structures compounded the confusion, and in a fortnight all O'Connor's gains had been lost. O'Connor himself, rushed up from Egypt not to replace but to "advise" a clearly overmatched commander, was a prisoner, and the British were back behind the Egyptian frontier again. But Tobruk, garrisoned by Australians, held out, a besieged fortress well behind enemy lines.

Rommel's startling success was part of an avalanche of disaster that hit the British in the spring of 1941. In April, Greece was overrun; in May, Crete fell. Wavell also faced a pro-Axis revolt in the British client state of Iraq, its oil wells a vital consideration. No wonder Churchill, desperate for a victory with which to impress neutrals and to bolster the bombed and rationed British public, became so overwrought at one point that he threatened to "have firing parties to shoot the generals" if Egypt were lost.

Wavell mounted a counteroffensive, BATTLEAX, in June. It failed, and the failure led to a change in Cairo. Wavell exchanged jobs with the Commander-in-Chief, India, General Sir Claude J. E. Auchinleck. The "Auk," an Indian Army officer of great ability, refused to renew the attack on Rommel until he felt there would be a reasonable chance of success. In the event, that meant November. Tobruk meanwhile, dramatically holding out, the one sustained British success in the desert, exerted a pressure on British planning that had less to do with its intrinsic importance than with its psychological significance. When the newly christened Eighth Army, under Lt. Gen. Alan Cunningham, finally launched CRUSADER in mid-November, nearly a month of confused fighting led to the war's first British victory over German land forces. (Auchinleck had relieved Cunningham a week into CRUSADER and replaced him with his own deputy chief of staff, Maj. Gen. Neil Ritchie. The Auk himself, however, kept a close eye and guiding hand on the balance of CRUSADER.) The successful conclusion of CRUSADER, which saw the British again at Agheila, was overshadowed by the entry of Japan into the war—and Rommel was, once again, to reclaim quickly most of what had been lost, but BATTLEAX and CRUSADER taken together reveal most of the problems that plagued the British in Africa until El Alamein.

Rommel repeatedly profited from the clumsiness of the British command structure. Even more important, he commanded an army that had trained for, and applied, combined-arms tactics. British commanders, on the other hand, took into battle a force whose components were often poorly coordinated in action. Much of this was the legacy of the unresolved British doctrinal arguments over the role of armor during the interwar years. The fact that resources there were so scarce meant that little had been done to modernize equipment until literally the last minute. Too much should not be made of this factor, however. Some British equipment *was* poor—some, like the Royal Artillery's 25-pounder field gun, was not, and equipment

In North Africa, Axis and Allied forces dug in when they could to protect themselves both from enemy fire and the harsh desert sandstorms. Emplacements like these changed hands, too, as the front shifted back and forth.

has beeen blamed for too much. It was command and control, doctrine and tactics that were the greatest British weaknesses. Finally, the use of the adjective "British" tends to mask the fact that the Eighth Army was a mini-coalition, with Australian, New Zealand, and South African troops, as well as British and Indian. Commonwealth formations not only varied in character and capacity, but their commanders had the right to appeal directly to their governments if they received "unreasonable" orders. The Eighth Army was not an easy formation to command.

Auchinleck complicated matters by deciding to leave Ritchie in command of the Eighth Army after CRUSADER. Ritchie was outranked by many of his subordinates. Auchinleck also tended to continue treating Ritchie as a staff officer rather than as a responsible senior commander. The weakness of the new management showed up when Rommel counterattacked in late January. Once again he faced an inexperienced British armored division and outmaneuvered it, as Auchinleck and Ritchie issued orders at cross-purposes. Once again a fortnight was enough for Rommel to roll the British back, not this time all the way to the Egyptian frontier but to a line just west of Tobruk. There both armies paused for nearly four months. Dominating consideration of future moves for both sides was the fate of the tiny rocky island of Malta.

There was a symbiotic relationship between Malta's fortunes and those of the Eighth Army. Strike forces based on Malta could wreak havoc with Rommel's supplies, particularly when guided accurately to their targets by the increasingly abundant ULTRA, the now famous "Enigma" decrypts. To do this, however, Malta had to be supplied. And to run supply convoys to Malta without prohibitive losses, land-based air cover was essential. That in turn meant that Eighth Army had to recapture the airfields around Benghazi. German bombers based in Sicily, virtually next door to Malta, were pounding the island relentlessly; the garrison and the Maltese civilian population were on starvation rations.

London insisted on an attack that would win the coveted airfields in time for a convoy to be run into Malta during the moonless period in April. Auchinleck and Ritchie wanted to wait until they had a clear superiority (defined as 3:2) over Rommel in tanks. Both British sides in this argument drew on the same Enigma data. To Churchill (and to Sir Alan Brooke, the Chief of the Imperial General Staff), Enigma intercepts showed clearly that Eighth Army already *had* more tanks. Auchinleck, more vividly aware of the weaknesses, technical and tactical, of his army, drew the conclusion that he needed a clear quantitative superiority to balance German quality. The battle of the signals went on until Churchill finally ordered Auchinleck to attack or be relieved. But by that time it was already May—and too late. Rommel was about to attack.

The ensuing battle of Gazala, followed by the fall of Tobruk and Rommel's pursuit of the Eighth Army deep into Egypt, may well represent the nadir of the British Army's performance in World War II. Rommel made some serious opening errors, but a fumbling command performance by Ritchie and his subordinates allowed Rommel to recover. British tactical clumsiness then permitted him to defeat, piecemeal, the numerically superior British armor. Once the armor was out of the picture, Rommel mounted an attack on Tobruk (using a plan he had devised for a November 1941 assault that was interrupted by CRUSADER). The Tobruk fortress, weakly commanded by a South African general, fell in 24 hours, yielding 33,000 prisoners, 2,000 usable vehicles, 5,000 tons of food and, most precious of all, 1,400 tons of fuel. Exhilarated by success, his troops riding in British trucks fueled by British gasoline and eating British rations, Rommel (now a field marshal) drove his forces into Egypt, toward Cairo, Alexandria and the Suez Canal.

In the flush of such success, Rommel persuaded his superiors to postpone a scheduled attack on Malta while he exploited his desert victory. Thus, almost unnoticed, the chance of consolidating the German grip on the central Mediterranean passed. Ironically, by falling with such unexpected rapidity, Tobruk may have saved Malta.

During the course of his years in the North Africa desert, Rommel watched as air superiority swung to the Allies. Here, a German 4cm antiaircraft gun is loaded to fend off an Allied strike. These attacks increasingly bedeviled his supplies.

At Matruh, a hundred miles inside Egypt, meanwhile, Rommel's tired, understrength spearhead, the *Afrika Korps*, pulled off one of the great bluffs in military history. Thrusting between two widely separated British forces, either of which considerably outweighed him, Rommel spooked his opponents into further retreat.

Before the British pulled out of the Matruh position, however, heading for their final defense line at El Alamein, Rommel's pending defeat there already was taking shape. On June 25, Auchinleck flew up from Cairo to Ritchie's headquarters. He spent a few minutes alone with Ritchie in his command vehicle. Ritchie emerged, got in his car and left. The Auk had taken direct command of the Eighth Army. Behind him, the Royal Navy was pulling the Mediterranean fleet out of Alexandria. In Cairo, trains departing for Palestine were mobbed. Egyptian students cheered for Rommel, and nationalist Egyptian Army officers (like Anwar Sadat) were preparing to welcome the Germans as liberators. The British were burning so much confidential paper that the air was filled with charred fragments—"Ash Wednesday," as it was christened, was symptomatic of the sense of impending disaster that hung in the air in the rear areas. At the front, however, the Eighth Army's new commander told one of his senior staff officers: "The British pride themselves on being good losers. I'm a damn bad loser. I'm going to win."

"El Alamein" began with Auchinleck's assumption of direct command. It was not, moreover, one single battle, but a series of battles over a period of four months. The phrase, "the Battle of El Alamein," has unfortunately come to refer exclusively to the last of these contests (October 23-November 7, 1942), in which the Eighth Army, by then under Montgomery's command, defeated and forced into retreat Rommel's *Panzerarmee Afrika*. In fact, however, the really decisive engagement had come in July when Auchinleck deprived Rommel of his only real chance of breaking through to Cairo and Alexandria—and the Suez Canal.

Auchinleck had some important assets when, at the end of June, he began pulling together the battered formations of the Eighth Army on the Alamein line. First was the nature of the ground. Here, uniquely in the vast arena of combat that stretched west to Tripoli, it was possible to construct a position that could not be turned by the great armored sweeps around an opponent's inland flank that had been characteristic of the desert war. With its flanks anchored on the sea and the vast Qattara Depression, the Eighth Army's new position could only be penetrated by a frontal attack. And any such attack would have to be launched by very tired units. Rommel's successes had depended on the *Panzerarmee*'s steel core—the three divisions of the *Afrika Korps*. Continuous fighting for more than a month in blistering heat had reduced this formation to a threadbare remnant. When Rommel bounced the British out of the Matruh position, the three *Afrika Korps* divisions had among them only 60 tanks (about a third of which were light or command tanks) and about 2,500 infantry—effectively the strength of a brigade. (Rommel also had two Italian armored divisions, but questions of equipment and fighting power apart, they had only 70 tanks between them.)

Moreover, Rommel was at the end of an enormously long supply line that stretched back to Tobruk, Benghazi and Tripoli. The vehicles, fuel and rations captured at Tobruk had helped, but Rommel's forces were at the end of their logistic tether. The Royal Air Force, temporarily disorganized by the withdrawals (and the difficulty, in a fluid, dust-shrouded battle, of determining who exactly to bomb), was now reasserting itself from airfields close to the front line and intervening with increasing force on the battlefield, as well as against Rommel's supply lines.

Then, too, however important the struggle around the Alamein lines was to the British, it was strictly a sideshow to the German High Command, already committed to its second great summer campaign in Russia. No significant German reinforcements would be forthcoming. The Italians, who had troops available, did not have the right kind.

The British position, on the other hand, was the reverse,

mirror image of Rommel's. The struggle to hold Egypt was vital to the British. Churchill perceived, almost certainly correctly, that Britain's credibility as a major combatant was as much at stake as were the strategic and economic benefits in holding the Middle East for Britain. Fresher troops and better equipment (including 300 new Sherman tanks made available by Franklin Delano Roosevelt and George Marshall on that dark day when Churchill, on his second visit to Washington, learned at the White House that Tobruk had fallen) would reach the Eighth Army—if Auchinleck could buy the time for them to arrive.

Too, as Rommel's communications lengthened, Auchinleck's shrunk. At El Alamein the British had virtually at their backs the great supply dumps and service establishments located in the Delta area of Egypt. Finally, Auchinleck had the enormous advantage of knowing not only Rommel's logistic picture but also his operational intent. ULTRA, relayed from Bletchley Park in England, was supplemented by the product of the "Y" Service, the electronic-intelligence operation that concentrated on lower-level German radio traffic—largely tactical communications among formations on the battlefield. (Of course, Rommel was receiving help from German listeners and codebreakers, but the advantage in this exchange clearly lay with the British.)

All the assets the British enjoyed could easily have been negated—and all Rommel's minuses erased—if Auchinleck had fumbled. His army had become all too accustomed to falling back. The Auk had to make it aggressive. He himself was a product of the Indian Army's long tradition of frontier warfare, where tactical aggressiveness and determination were the price of survival. In a series of confused engagements that spanned the month of July, Auchinleck attacked again and again, guided by ULTRA and Y intelligence, forcing Rommel to react to his moves, compelling him to use up his irreplaceable German formations to keep the less mobile and resilient Italians from being battered to pieces.

Unfortunately, while Auchinleck's objectives were well-chosen, operational and tactical execution by the Eighth Army remained clumsy. The old problems of coordination between arms and formations remained. The urgency of the situation left no time to retrain the Eighth Army. Its two corps commanders, moreover, were tired, pessimistic men, and some Commonwealth commanders, like Maj. Gen. Bernard Freyberg, V.C., of the redoubtable New Zealand division, were convinced the armored formations, all British-manned, would always let down the infantry, largely Commonwealth. In these circumstances, it is not suprising that, while Rommel may have been strategically baffled, his weary, skeletal German formations were seldom outfought.

Nonetheless Auchinleck won, during that chaotic month of fighting, a great victory—and no one understood that more clearly then Rommel himself. "Although the British losses in this Alamein fighting had been higher than ours," he wrote in his subsequent narrative of the campaign, "yet the price to Auchinleck had not been excessive, for the one thing that had mattered to him was to halt our advance, and that, unfortunately, he had done."

Auchinleck had stopped Rommel—he had bought time to prepare the Eighth Army for an offensive of its own, but the long series of disasters in the desert had set in motion a chain of events that would place the conduct of that offensive in other hands. In January, Rommel's success in rolling the Eighth Army back to Gazala, taken together with disasters in the Far East such as Singapore's collapse, had produced a political crisis in Britain. Churchill won a 464-to-1 vote of confidence in the House of

TOP: Montgomery's target was the wily "Desert Fox" himself—German Field Marshal Erwin Eugen Johannes Rommel—seen here (center) conferring with aides on the eve of battle. ABOVE: Preparatory to any German ground attack in North Africa was a ruthless series of prolonged air strikes—here, a German Focke-Wulf 190 blasts a smoking British tank near the Via Balbia in 1942.

Commons, but the lopsided victory concealed an underlying dissatisfaction, not with Churchill's inspirational qualities, but with what seemed an endless series of military and naval disasters that appeared to call in question the way the war was being run.

No one was more aware than Churchill himself. In February 1942, he reshuffled his government, but what he really needed was not new ministerial faces but palpable victory. Instead he got massive defeat, with the sudden loss of Tobruk—the great symbol of Britain's lone military success against Germany—adding a sense of disgrace as well to his cabinet.

As Rommel crossed the Egyptian frontier and Auchinleck relieved Ritchie, a motion of censure on the conduct

of the war was placed on the agenda of the House of Commons. The Gallup Poll showed Churchill's personal approval rating among the British had fallen to what proved to be its wartime low (slightly below 80 percent). Churchill survived the vote of confidence on July 2 by 476 to 25, although there were 40 deliberate abstentions. The Prime Minister knew, however, that he could not ride out another major setback in the desert. Victory had become a necessity if his government were to survive. When Auchinleck sent a signal on July 31 indicating that at least six weeks would elapse before the Eighth Army would be ready to mount a major offensive, what Churchill saw was not the Auk's great success (which had saved not only the Canal, but almost certainly Churchill's government), but delay—long delay before victory could bring vindication. Chief of Staff General Sir Alan Brooke was already on his way to Cairo. The Prime Minister decided to join him.

The result of Churchill's two stays in Cairo that August (broken by his first trip to Moscow) was a major reorganization of the British theater command structure and a wholesale change of personnel at the top. The Middle Eastern theater was unmanageably large. Auchinleck had had to concern himself not only with Rommel but with preparations to resist a German thrust from the north through Turkey or the Caucasus. Churchill split the theater, creating a new Persia and Iraq Command. Auchinleck, whose removal was probably inevitable given Churchill's desire for a fresh start, was offered the new command and refused. (After a year unemployed, he would again become Commander-in-Chief, India—the last, and perhaps the greatest, incumbent of that post.) His successor, General Sir Harold Alexander, was given a directive that left no one in any doubt that beating Rommel was Priority One for the British.

Churchill's first choice to take over the Eighth Army was Lt. Gen. W.H.E. ("Strafer") Gott. One of the original 1940-vintage desert warriors, Gott had risen from colonel to corps commander and was something of a legend in the Eighth Army. His handling of his corps had not been particularly distinguished, and as he told Churchill, he was dreadfully tired. It wouldn't matter—the chance factor of a roving German fighter coming across the transport aircraft flying Gott back to Cairo saved the Eighth Army from a weary, pessimistic commander. Gott's death gave Brooke the chance again to advance the name, this time successfully, of his protégé, the odd, cantankerous, ambitious, but undeniably very capable Lt. Gen. Bernard L. Montgomery.

Monty was a figure who polarized opinion during his life, and historians' judgments reflect that. To assess what happened at El Alamein, it is not necessary to grapple with the complexities of his character, however, only to note certain facts. In his notorious *Memoirs*, published in 1958 (and a prime exhibit in any case constructed by his detractors), he alleged that when he assumed command he found the Eighth Army poised for further retreat. This was so far from the truth that Monty avoided a libel action by Auchinleck only by agreeing to the insertion of a correction in subsequent editions of the book. Montgomery was very unflattering about the general state of the Eighth Army, as well as about Auchinleck's plans. But in fact Montgomery inherited from Auchinleck much of the staff with whom he won his first battles. Some of them, like "Freddie" de Guigand, his invaluable chief of staff, would remain with him throughout the war.

In reaction to Montgomery's often difficult personality and blatant distortions of history, a school of revisionists arose, one of whose claims is that Monty's first victory, at Alam Halfa (August 30-September 7, 1942), was, in effect, plagiarized—that the plan was in fact the work of Auchinleck and one of his principal staff officers, Brigadier Eric Dorman-Smith (who was sacked along with Auchinleck, and whose Army career was permanently blighted). The "fog of war" is particularly dense around the Eighth Army in August and September 1942, most of it churned up by exchanges between the partisans of Monty and the Auk. Alam Halfa was Monty's first victory. He claimed, characteristically, "it was fought in complete accord with my master plan." In fact, the ground determined the layout of the defenses, and Montgomery did inherit a scheme for a defensive battle from Auchinleck. He then made important modifications—modifications that were possible because Auchinleck had won the one thing Napoleon had identified as irreplaceable in war: time. Rommel, exhausted and ill, had few illusions about the battle he opened on the evening of August 30, 1942. Swinging through the lightly held southern end of the Alamein position, he turned north toward the British rear, only to come up against a solid defensive wall on the Alam Halfa ridge. Pounded by British gunfire and drenched in bombs by the Royal Air Force, Rommel's last attack came to a halt almost immediately and turned into a withdrawal after three days. Montgomery made only a gesture at following up. He had stopped the Desert Fox cold in his tracks. For the moment, that was enough.

Alam Halfa is characteristic of Montgomery's method: tactical caution in attaining limited objectives, followed by sweeping claims that all went according to a flawless "master plan." Underneath Montgomery's irritating assumption of omniscience, however, was shrewd professionalism that fastened on the essence of the problem. (Patton and Stilwell were as eccentric as Monty. Like him, they were also very professional; unlike him, they did not survive to write tendentious accounts that would cloud their very real achievement.) Montgomery understood that the British Army did some things well—and some things poorly. Among the latter was maneuver warfare. Monty's "genius," limited but real, lay in never asking his army to do what it was not able to do. Alam Halfa was a defensive battle, something the British Army did well. When Rommel withdrew, Montgomery let him go rather than risk marring his clear-cut victory by giving the Germans the opportunity to meet their less agile opponents in more free-swinging mobile combat.

Monty was now in a strong position and could insist on setting his own time for the next British offensive. Churchill simply could not afford anything less than an overwhelming victory. With Alam Halfa behind him, Montgomery had established his credentials as a battle winner. Moreover, Malta was no longer in imminent danger—the bitter fruit of Rommel's greatest error was the renewed constriction of the Axis supply lines. Monty could therefore prepare at leisure a carefully orchestrated offensive against an opponent growing inexorably weaker even as Monty's own forces were increased, reequiped and, to the extent possible, retrained.

"Second El Alamein" opened on the evening of October 23, 1942, as 882 field and medium guns began firing the heaviest barrage the British Army had laid down since 1918. That was the key to what followed. Montgomery, a cautious infantryman, had reverted to 1918, when the British Army had developed a technique for moving forward in careful stages without incurring the frightful casualties of 1916 and 1917. He did so because he was quite hardheaded about both his army's capacities and the balance of forces.

The British Army did set-piece attacks well, and controlled attrition was Monty's method—using his greater

resources and lavish firepower to "crumble" the enemy. The Eighth Army's casualties among the combatant personnel in the divisions engaged were high, almost World War I percentages. But unlike the Somme and Passchendaele, it was a controlled and efficient attrition. Monty lost men (although not too many—he knew his army could not afford that either), but he got results.

Rommel, who had been on sick leave in Germany since Alam Halfa, returned to conduct what he called a "battle without hope." Even the fact that Monty's master plan broke down almost immediately did not help the *Panzerarmee*. A British infantry corps was to drive corridors through the deep, mine-studded German defenses on the first night. Then an armored corps was to debouch from those corridors into the enemy's rear. The scheme was too elaborate and the time frame was too short. It failed. Montgomery then did what a good commander does—he readjusted. (He would, of course, never admit to being flexible, but he was.) There followed ten days in which the German and Italian formations, nearly immobile from lack of fuel, were battered to pieces. Monty was fighting his, and his army's, sort of battle—depending on the grim determination of his infantry and the superb gunnery of the Royal Artillery. Obligingly, Hitler forced Rommel and his men to stand in place, a fixed target for Montgomery's battering ram.

At length, Rommel took matters into his own hands and withdrew. Montgomery fumbled the pursuit, aided by one of his corps commanders (with whom he quickly thereafter parted). Monty later would rather limply blame the failure to trap the remnants of Rommel's forces on heavy rain that bogged his troops down. But it rained on Rommel, too. The fact is that the improvisations of mobile warfare simply were not his strong suit, and the only time he forgot this, in MARKET GARDEN, the results were not happy.

In the largest sense, Montgomery's failure to trap Rommel did not matter. Montgomery had won a crushing, if not a total, victory over a legendary opponent. He had given Churchill and the sorely tried British public a desperately needed glimpse of victory. It was also, and just in time, Britain's last great independent victory, for as Rommel retreated westward. TORCH began, the North African invasion signaling the arrival of the Americans in force. In the ensuing 2½ years of coalition warfare, Britain was to be increasingly overshadowed by the United States. But Monty and the Eighth Army had reestablished the British Army's combat credibility. Churchill made the most of the Eighth Army's fame during the war and polished the legend in his memoirs. Montgomery thus became not only famous but as close to irremovable as any Allied commander (except perhaps MacArthur). Given his personality, it was fortunate for him that this was so.

The question, however, remains. Who beat Rommel? Auchinleck won the decisive battle that saved the British position in the Middle East. Montgomery won a battle that not only vindicated the British Army's credibility as a factor in alliance politics but also sustained the Churchill government. The Auk stopped Rommel; Monty defeated the suspicion that the British could not win. Is it surprising that Churchill always wrote and spoke so kindly of him? □

Raymond Callahan, a professor of history at the University of Delaware, is on leave while writing his latest book on World War II. *Suggestions for further reading:* Fire-Power: British Army Weapons and Theories of War 1914-1945, *by Shelford Bidwell and Dominic Graham;* Dilemmas of the Desert War: A New Look at the Libyan Campaign 1940-1942, *by Michael Carver.*

TOP: Defeating Field Marshal Erwin Rommel became an obsession with Winston Churchill as his troops suffered defeat after defeat by Axis forces, until he found Bernard L. Montgomery. MIDDLE: War in the desert was like war at sea, with fixed points meaning little, and the object being to capture or destroy mobile enemy forces, such as these British tanks. ABOVE: Victorious British Tommies proudly display a captured Nazi flag atop a knocked-out German tank at the time that Rommel's final reteat began.

Full Offensive Restricted

Kept secret for three decades, the ULTRA intercepts of German communications gave the Allies a "listening post" so valuable they could not compromise it by responding overtly.

By Foster McLeod

In 1974, a retired Royal Air Force group captain, Fred Winterbotham, published his World War II memoirs. In Britain, such a book might not have made much news among the hundreds of recollections published by retired officers. True, Winterbotham did have a rather interesting background, having been a World War I fighter pilot and prisoner-of-war, as well as an intelligence officer in the 1930s assigned to monitor the buildup of the German *Luftwaffe*. What was of more interest—indeed a bombshell—were his World War II duties, which were, in his words, "to distribute with complete security the highest form of intelligence obtained from the breaking of the supposedly unbreakable German machine ciphers to President Franklin Delano Roosevelt, Prime Minister Winston Churchill and all the principal Chiefs of Staff and commanders in the field throughout the war."

An operation code-named ULTRA, the breaking of high-level German code throughout the war, had long been rumored among World War II historians, especially those specializing in intelligence operations. However, the restrictions of the British Official Secrets Act and the lack of documentary evidence had relegated the amazing story to the status of unconfirmed rumor.

Winterbotham's wartime memoirs, appropriately entitled *The Ultra Secret*, blew the cover off both the restrictions of the act and the lack of documents—if nothing else, historians now had firsthand evidence that Churchill and Roosevelt were privy to "secret intelligence" concerning German strategic intentions. The question still existed—what did the intelligence tell them? And then, what were they able to do with it? Unfortunately, the Group Captain's recollections here were sketchy, since he dealt more with those who had access.

Within a year, added inklings on both the purloined information and its use were forthcoming—and just as dramatically. British journalist Anthony Cave Brown, working with newly declassified American documents in the National Archives in Washington, along with inter-

Despite a massive build up in the late 1930s by the Luftwaffe, the Allies would have an advantage once World War II started, even with their initially weaker air forces. That was the ULTRA peep hole into German planning.

TOP: From the very beginning of the war, the Allied leaders had the immense advantage of knowing their enemy's goals. Here, FDR (center) and Churchill (right) meet at Quebec. MIDDLE: The German Air Force relied exclusively upon Enigma for operational orders, logistical reports and guidance from its commander, Hermann Göring (second from right). ABOVE: On Sept. 1, 1939, the gray-clad German Army rolled over Poland, which was quickly defeated, but it was the Polish Secret Service that obtained—and figured out—the first enemy Enigma machine among the European Allies.

views of many who had worked on ULTRA, discovered hard evidence as to its use. In his book, a massive tome entitled *Bodyguard of Lies*, he wove the ULTRA material into a masterful tale about all forms of secret intelligence during the war. With respect to ULTRA, he maintained that Churchill had, thanks to decrypted German Air Force messages, two days' advanced notice of the *Luftwaffe* air raid on Coventry during the night of November 14, 1940, one in which 50,000 British homes were damaged or destroyed, the historic Coventry Cathedral leveled and 4,000 civilians left dead or injured.

Rather than evacuate the city and thus alert Hitler to the ULTRA intelligence source, Churchill withheld the information. Thus, as Brown wrote, Coventry apparently was "a sacrifice made to protect the security of ULTRA." While the accusation later was proved false by official British historians, it did serve to catch the attention of the public. Within several years, the long-closed documents concerning the ULTRA operation, as well as the actual intercepted and decrypted Axis messages, were opened—at both the American National Archives and the British Public Records Office. Many who had worked on the secret operation during the war (and had taken lifelong oaths never to reveal their activities) now broke their silence. In letters to the *London* and *New York Times*, as well as in the pages of *The Princeton University Alumni Weekly* and *Washington Post*, they began to reveal a confidence most of them had thought they would take to their graves. To many, it seemed like the last secret of World War II.

Inevitably such sensational revelations, many exaggerated with age, led some analysts to claim the Allies never would have defeated the Axis without such knowledge—to assert that ULTRA had won the war. The assertion appears somewhat overstated, but it did lead others to ponder if the history of the war might not have to be rewritten. Interestingly, official British historians had been given access to such information during their research (though not permitted to write such), while their American colleagues were not.

The origins of ULTRA lay in the evolution of modern warfare during the 19th and early 20th centuries. Commencing with introduction to the battlefield of large armies by Napoleon in the early 19th century, the trick for strategists became the correct application of force at the proper time and place. To do so required the speedy and reliable transmission of information and orders, as well as the equally quick movement of troops. During the American Civil War, Union commanders sent their orders by telegram and moved their troops by railroad, a practice that the Prussian General Staff further refined during the wars of German unification in the late 19th century. Thus, technology enhanced mobility, introducing a new dimension to modern strategy.

Commanders soon realized the ability of their opponents to intercept such messages and to offset the new mobility through countermeasures of their own. To guard against such interception, military forces relied upon the proven art of coded messages. The ultimate was the so-called "one-time pad," that is, a code that was used only once and then discarded. In the past, this type of measure had been used only in special instances because of its complexity. As a result, strategists continued to rely upon written orders delivered in person or by messenger.

By the time of World War I, the telegraph had been replaced by the wireless, thus saving the time and resources necessary to lay wire. Now messages could be quickly dispatched with no concern as to where—once sent, though, they were the property of all who could receive them, including the opponent. Literally, anyone could "pluck them from the air." Not surprisingly, coded

During the night of Nov. 14, 1940, 50,000 British homes at Coventry and historic Coventry Cathedral were leveled and 4,000 civilians left dead or injured—but ULTRA stayed secret from then until long after the war.

messages became the norm, and the "one-time pad" became the desired. It remained only a matter of time before technology would be asked to solve this problem.

Shortly after World War I, a Dutch inventor produced a *Geheimschriffmachine*, "a secret writing machine," that, through a series of rotors which were preset according to design by both sender and receiver, allowed for the speedy and reliable encrypting of messages. The patent was procured by a German engineer, Artur Scherbius, who further refined the machine and marketed it commercially as "the Enigma." In 1927, the U.S. Army bought one for $144, as did the Japanese Army. Those transactions sowed the seeds for the American version of ULTRA and the World War II breaking of the Japanese codes, or Operation MAGIC.

The Germans adopted the Enigma machine for several reasons. One, they were severely limited in military development by the provisions of the Versailles Treaty and needed a safe and secure method of hiding their buildup. But more importantly, they were refining the lessons of World War I into new tactics of mobility through exploitation of the airplane and the tank—tactics that soon would be known as *Blitzkrieg* and tactics that required secure and reliable wireless communications. With Hitler's rearmament program, the Enigma became a requisite at all levels of the German tactical and strategic communications network. The German Navy sent its orders to its deployed U-boats. The German Air Force reported daily aircraft maintenance status and unit situation reports. The German Army made changes in operation orders, as well as monthly strength reports. And the German High Command issued strategic directives, as well as personal messages, to field commanders.

By the late 1930s, the Enigma machine was relatively small and easily transportable. It consisted of a standard typewriter keyboard and, above that, 26 letters on top of flashlight bulbs. The guts of the machine revolved around three or four rotors (during World War II, the German Navy would add one, with significant results) and a small panel in the rear that looked like a telephone switchboard. The code would be preset by both sender and receiver by positioning the rotors and adjusting the panel.

To operate the Enigma, an operator merely typed in the message letter by letter. As he hit each key, the electric impulse would pass through both rotors and panel, and another letter would be illuminated. He would record the illuminated symbol thus transmitted. Those receiving the message would do the same, though in reverse.

Security for the Enigma came in the intricate wiring in the rotors and panel, as well as in the connections between the two and the keyboard—especially as the rotor moved after being used once. The possibility of different settings thus became a factorial 26(26), or 403,291,461,126,605,635,584,000,000. Even without the moving rotor, possibilities for different settings were 7,904,853,580,025. The inventor—and the Germans—counted on the fact that such multiplicity was too much for the human mind to cope with. As the codes were changed—in most instances every day—and as each activity had its own code, each message became its own "one-time pad."

German confidence in the machine appeared justified because the science of code breaking, cryptoanalysis, had not progressed as quickly. In reality it always had been a "catch up" game, one in which new codes were developed before they could be attacked. The result was very much a numbers game that demanded the patience and intuition of a chess player. Code breakers relied upon such things as the frequency of a letter or word—that is, the assumption that a letter or a word would be used a certain amount of times. They looked for frequency in routine parts of messages such as a date, time or signature. They hoped for operator casualness or mistakes. But, more than not, they relied on persistence with a healthy amount of luck. It was a tedious business, with long unrewarding hours, days and weeks. Those most adept at its practice proved to be those who handled such tasks routinely in civilian life, such as mathematicians and physical scientists.

Those most concerned with the Germans and the Enigma during the 1930s were those most threatened by resurgent German militarism—the Poles and the French. Poland, which had been revived as a country by the Versailles Treaty, maintained an uneasy coexistence between Germany and Russia. The Polish Secret Service procured a copy of the

The land war, too, was affected by ULTRA. Stalin, however, ignored Churchill's warning that Hitler planned to invade the Soviet Union, and thus the German tanks surged ahead.

Enigma machine being used by the German military and turned it over to Poland's scientists. By 1937, the scientists had devised a system that broke some of the codes. In doing so, however, they encountered problems that would haunt Enigma codebreakers throughout the war. First, the actual code-breaking proved uneven—the Germans routinely changed their rotor settings and plug boards before a solution could be reached. Secondly, the task was enormously time-consuming, and often the information finally elicited was too old to be of use. And lastly, even though the Poles had the information, they lacked the military ability to act upon it. Thus, though the Polish Secret Service monitored the German buildup prior to the *Blitzkrieg* of September 1, 1939, Poland was powerless to act.

Still, the Polish scientists had proved the Enigma codes could be attacked and broken. This information was passed along to their French counterparts, who likewise had suffered brutally at the hands of the Germans during the past half century and were watching Hitler's revival of German militarism with warranted concern. In 1938, Polish agents were able to smuggle a version of the German Enigma machine into France, along with the requisite scientific abstractions that enabled the code to be attacked successfully. The *Service de Renseignement* continued to work on the theoretical aspects, while also involving the British for the first time. Indeed, an up-to-date version of the German Enigma was smuggled into London's Victoria Station via a diplomatic pouch later that year. Thus were set in place the mechanics and procedures for the ULTRA operation.

Armed with the confidence that the German code could be broken, English cryptologists now turned to technology to address the problem of code changes and to speed up the actual operation. Given knowledge of the inner workings of the Enigma, the Poles had constructed a "bombe," in essence the forerunner of a modern computer, which attempted to parallel the encrypting operation. Interestingly, at the same time, U.S. Army and Navy signal specialists were attempting the same approach to the Japanese codes. By 1940, American cryptoanalysts were routinely reading Japanese diplomatic messages between Tokyo and Washington.

But confidence and ability to crack German military and Japanese diplomatic codes mattered little in 1940 and 1941. France was overwhelmed, Dunkirk was evacuated, Russia was invaded, Pearl Harbor was surprised and the Philippines fell. As these Axis successes illustrated, prior knowledge of your opponent's intentions is not enough. Just as important is the ability to do something about it, to counter. At this stage of the war, neither the British nor the Americans had that capability.

From such frustration came Allied determination to exploit the ULTRA advantage. It was a priceless asset, clearly, but it could be compromised all too easily. As the British quickly realized, most acutely when they alone faced Germany, no military action could be taken based solely upon ULTRA knowledge. To avoid alarming the German enemy, they instituted a new classification and handling of the intelligence derived from Enigma. Any information derived from Enigma intercepts was to be classified ULTRA SECRET—hence the codeword ULTRA. It was to be sent by special messenger—this is what Group Captain Winterbotham was for Churchill—and only a select few commanders and leaders were to be told of the source—Dwight Eisenhower was one, and Stalin was not. All information sent to the field went by a separate communications channel to an ULTRA officer—their field sections were called SLUs, Special Liaison Units. Most importantly, unless the information could be linked to other means of intelligence, no military response could be undertaken—for example, no attack could be made on a resupply convoy unless it were also spotted by air reconnaissance.

Wisely, the British elected to centralize all their Enigma activity at a country estate outside of London, Bletchley Park. It was located midway between Oxford and Cambridge Universities, since many of the scientists, linguists

PRECIOUS SECRET FOR 30 YEARS

With the success of OVERLORD, strategic use of ULTRA in the war came to an end. Though BP continued to function, the Germans relied increasingly upon land lines and telephones. Thus there was little operational traffic to intercept. The German Air Force continued to send logistical reports, but the *Luftwaffe* no longer was a major factor. The situation for the German Navy was the same.

Tactically, BP was able to assist in several instances, such as the Seventh Army landings and breakout during the ANVIL invasion of southern France in August and September 1944. Another instance was ULTRA's advance warning of the winter German offensive, NORDWIND. On the other hand, it failed to warn of German intentions and movements in what became the Battle of the Bulge—primarily because of the security steps, that were taken by Hitler and his commanders.

American use of ULTRA in the Pacific likewise lapsed as the war drew to a close. General Douglas MacArthur had initially been reluctant to accept this type of intelligence because he knew so little about the source (Montgomery had also been reluctant, until he was counseled by Churchill). MacArthur was persuaded to mount the air strikes that led to the Battle of the Bismarck Sea based upon ULTRA information, as well as the decision to bypass Wewak in what became known as the "Hollandia Leap."

With the war's conclusion, knowledge of ULTRA was locked away because of the lifetime secrecy oaths that all BPers—British and Americans alike—had taken. Many of the "flimsies," copies of dispatches sent by BP to SLUs in the field, were destroyed, as were the enormous card catalogues. All ULTRA field de-

and technicians came from these prestigious institutions. Officially, it was called the Government Code and Cypher School. To its workers, it became known as the Golf Course and Country Club, BP, or Station "X". Throughout the war, literally thousands of Britons worked brutally long ULTRA shifts—"24 hours on, 36 hours off." Though all were required to take lifelong oaths of silence, only a few had knowledge of the final outcome of their labors.

The primary reason for their lack of knowledge came from "compartmentalization." The ULTRA operation involved enormous and varied amounts of seemingly unrelated activities. The German traffic had to be intercepted and retransmitted to BP. It had to be analyzed by scientists and decrypted by the "bombe". It had to be translated by linguists and read by specialists. It was integrated with other ULTRA intelligence by analysts. Finally, it had to be dispatched to London by motorcycle or sent to the field by "flimsy."

To handle the variety as well as to ensure proper compartmentalization, BP was organized into "huts," literally prefabricated buildings housing different specialists. Most crucial to ULTRA were Huts 3 and 6. In Hut 6, scientists labored to break the codes. Early in the war, while the "bombe" was being perfected and much work was being done by hand, there were long periods when the codes could not be broken. In Hut 3, analysts read the messages, then decided who received the precious information. Here the sheer volume of traffic constantly wore on the nerves of workers. In between were managers who decided what codes would be attacked by the scientists and what messages would be read by the analysts. Initially, all the BPers were British, although Churchill told Roosevelt about the Enigma operation in December 1941, and FDR followed suit by sharing the American decoding success with Japanese messages. While the two Allied leaders agreed to share operational information, the mechanics were to be kept secret on strictly a national basis. By 1943, however, the stress and strain at Bletchley Park, the long periods of unbroken codes and the huge backlog of intercepted messages, finally forced the British to open the code center's doors to American personnel. The first Americans to arrive at Bletchley included a future Supreme Court Justice, a future national security adviser to the President, as well as the future chief prosecutor at the Nuremberg Trials. ULTRA became truly an Anglo-American operation.

Rather than use ULTRA data for interdiction of German bombers by British fighters (viewed here), the RAF was instead moved away from targeted airfields to fight again.

The use of ULTRA depended upon the types of messages intercepted and decrypted. Though Hitler never seems to have suspected that his mail was being read, he did not rely upon Enigma for his orders. He preferred face-to-face meetings with his generals—thus, often all Enigma would reveal concerning Hitler was a summons from *der Führer* to report to Berlin. The German High Command understandably was more comfortable with orders in writing, especially for major operations. What Enigma had to say about planning often was based upon unknown decisions already promulgated by Hitler—the related information could be meaningless without further background. Because of this, BP knew little of the German plans for the Battle of the Bulge. By similar token, the German Army used telephones and telegraph for routine reports, but when operating in North Africa and Russia, it had to rely upon the Enigma machine. ULTRA did prove valuable here. When the Germans were operating in Italy, France and Germany, on the other hand, Enigma revealed very little. For some reason, the German Air Force relied exclusively upon Enigma for both operational orders and logistical reports as well as guidance from its commander, Hermann Göring. Thus, Enigma provided a constant picture of *Luftwaffe* intentions and capabilities throughout the war. Given their operational environment, the German Navy ships at sea had to rely upon Enigma for all orders and reports, though the Navy compensated by switching codes more frequently and adding an additional rotor to the Engima. The added rotor had great significance in the Battle of the Atlantic.

tachments had destroyed their records per standing operating procedures. Some American participants recorded their recollections, but these were locked away in what became the National Security Agency (NSA) archives. For a brief period of time, a postwar Congressional investigation of Pearl Harbor brought American ULTRA materials to light, though only those leading up to December 1941. They, too, were locked up.

British historians at work on their country's official histories were directed not to write about ULTRA. Some British institutional monographs written during or immediately after the war were quietly shelved at the Public Records Office. One American official historian seeking clearance for his discussion of the planning for OVERLORD submitted a draft containing the sentence, "It was almost like the Allies were reading the Axis mail." It was removed—he did not know why until almost 30 years later!

All the secrecy was changed in the mid-1970s with the publication of *The Ultra Secret* and *Bodyguard of Lies*. Then, with the opening of the ULTRA documentation at the Public Records Office, as well as the transfer of American ULTRA documents from NSA to the National Archives, came a flood of individual BP recollections, along with release of previously classified ULTRA monographs. At the same time, it became clear that many ULTRA records no longer existed—or, at best, are still hidden away. In the meantime, many key participants such as Churchill and Eisenhower died without thoroughly discussing the impact of ULTRA upon their decisions and actions.

What then of ULTRA? What difference did it make in World War II? Did it, as one distinguished military historian said, "end the war earlier than it would have elsewise?"

Given the fact that we still do not have all the records on ULTRA even now, one must wonder.

TOP: During the Battle of Britain in 1940-41, ULTRA intercepted and decrypted Luftwaffe *orders for bombing raids, allowing British air defense planners to counterattack. ABOVE: Enigma provided a constant picture of* Luftwaffe *intentions and capabilities throughout the war. Here, a German bomber prepares to take off for an air strike.*

The capability to react militarily, as well as concern for possible compromise, dictated how ULTRA was used by the British in the early phases of the war. At that time, when they stood alone against Hitler, they simply did not have the forces to react in an offensive manner—nearly all operations were essentially defensive. So was their use of ULTRA. For instance, before American entry into the war, ULTRA intercepted and decrypted daily location reports from German U-boats prowling the Lend-Lease shipping lanes off Greenland. The British routinely passed this information to the U.S. Navy—not to be used for attack purposes but rather to route American convoys around the danger points. During the Battle of Britain, ULTRA intercepted and decrypted the *Luftwaffe* orders for bombing raids. Rather than use the information for interdiction of German bombers by British fighters, it was used to move the British aircraft away from the targeted airfields, thus saving them for another day.

American use of intercepted Japanese information in the early phases of the war was distinctly different. Though they had been badly surprised at Pearl Harbor—an example of so much intercepted intelligence that it was impossible to sort out the correct intentions in a timely way—the United States relied upon advance notice of the Japanese operational plans for Midway Island to position American naval forces. Thus, the American version of ULTRA won a decisive battle that, in the long run, turned the tables in the Pacific. (At the time, many in British Intelligence winced at such offensive use, concerned that the American MAGIC had been compromised.)

But the British were able to use their ULTRA capability offensively in North Africa, especially when Erwin Rommel and Hitler communicated about an upcoming German offensive in August 1942 that would be the final drive against British positions in Egypt. Forewarned by ULTRA, Churchill personally wired his field commander, General Bernard L. Montgomery. The lines of Monty's forces at Alam Halfa were shifted, and the German offensive fizzled. The battle signaled the beginning of the end for the Desert Fox and his *Panzerarmee Afrika.*

What really brought the Germans in North Africa to their knees was logistics. They simply ran out of gas and ammunition. And this was a direct result of offensive application of ULTRA. Rommel's logisticians would send their daily supply requirements by Enigma. Notification of convoys and cargo from Italy would be radioed back, messages also monitored and read at BP. To keep ULTRA's role secret was only a matter of diverting a lonely British air reconnaissance aircraft over the German convoy to "spot" it prior to attack. When the Germans and Italians surrendered in May 1943, it was because they had run out of supplies in Africa and lacked the necessary shipping to return forces to Italy. In retrospect, this appears ULTRA's finest offensive hour of the war.

At the same time that ULTRA was proving critical in North Africa, it was decisive in the Battle of the Atlantic. During the first five months of 1943, German U-boat torpedoing of Allied shipping in the North Atlantic had been awesome. Most disconcerting were the first three weeks of March, when losses grew from the 360,000 tons registered in February to 630,000. During the period of March 16-20, 21 cargo ships—some 141,000 tons—were sunk without a single U-boat loss. The number of ships sent to their watery graves exceeded the construction of new ships—it would not take a genius to project the outcome of this inverse trend. Given Allied reliance upon convoy shipping to the future of war, the planners had very good reason for concern.

At BP, for reasons of its own, the Royal Navy chose to operate its own "hut"—the Operational Intelligence Centre (OIC). Within this structure, the Submarine Tracking Room struggled to plot U-boat locations. There, ULTRA had been silent for months with respect to the daily communication with Nazi submarines primarily because, as was confirmed after the war, the Germans had added an additional rotor to their Enigmas. In April 1943, the ULTRA specialists finally deduced the addition of another rotor. Within a few days, the German naval code was once again broken. In May, German sub losses rose so quickly that the U-boat commanders called May "the month of the thunderbolt." As their losses grew, the Germans withdrew from the North Atlantic—by the summer, the Allies had won the critical battle, largely because of ULTRA.

The other major use of ULTRA in 1943 set the stage for its most important contribution to the war—confirmation of deception planning. As part of the planning for HUSKY, the invasion of Sicily, the Allies constructed a wily deception operation, MINCEMEAT. Given the German ability to reinforce the Italian island after the fall of North Africa,

The panzer or armored blitz of 1939-42 by the Germans stunned the world and ushered in a new kind of warfare. Here, a light PzKpfw Mark III tank crosses the Ukraine's Bug River in June 1941. Could they be stopped?

Eisenhower and his staff were justifiably concerned. They proposed to deceive Hitler as to their intentions by making him think the invasion was coming elsewhere. Thus they hoped to spread German strength throughout the Mediterranean. A phony plan for an Allied invasion of Sardinia and Greece was written, placed in a briefcase handcuffed to the body of a recently deceased British "staff officer." Hurriedly rushed by submarine to the Mediterranean, the body and briefcase were put afloat off the coast of Spain. As has been described in the book and the movie *The Man Who Never Was*, the operation succeeded—the Germans found the plan and took the bait. On 15 May, ULTRA intercepted a message from the Berlin High Command to the German Commander-in-Chief for the Mediterranean which said, in part: "According to a source which may be regarded as absolutely reliable, an enemy landing undertaking on a large scale is projected in the near future in both the eastern and western Mediterranean . . . Covername for the landing is HUSKY." While the codename was correct, the location was wrong—Bletchley Park had bought some precious time for the Allies.

By late 1943, with the addition of American analysts to BP, came intercept information from MAGIC—the Japanese codebreaking—in particular from the reports that the Japanese Ambassador to Berlin, Baron Oshima, sent back regularly to Tokyo. In October of that year, one of his aides had been given a detailed tour of the anti-invasion defenses on the French Atlantic coast. The resulting report had been intercepted in Washington, decrypted and sent to BP as part of ULTRA. Several months later, Oshima himself took a tour, accompanied by Rommel, who now was in charge of the German defenses in Normandy. The intercepts confirmed what Eisenhower and his planners, now hard at work on OVERLORD, feared—that the German defenses of Normandy were very strong. In their eyes, success hinged upon Allied ability to convince Hitler that the main invasion was coming elsewhere—even after the Allied forces landed in Normandy—and not to commit his reserve until after the Allied beachhead had been secured. If he counterattacked right away, the Allied Expeditionary Force might be stopped on the beaches. What was needed was another deception plan such as MINCEMEAT, but one on a grander scale that would indicate the invasion was headed for the Pas de Calais.

The Allied planners now fashioned their most decisive deception plan of the war—BODYGUARD—an elaborate and complex ruse designed to convince Hitler that the invasion was going to be everywhere else but Normandy. The crux of the phony plan was Pas de Calais. For this, a fictitious First U.S. Army Group (FUSAG) was created under the command of George Patton. Its communications network consisted largely of radio stations in Scotland. Through a network of compromised Nazi spies in England, information on Patton and his forces was fed to Berlin, "confirming" that the major Allied invasion was to be in the Pas de Calais—after a diversionary attack at Normandy. The trick now was to convince the Germans to hold their reserves as long as possible. Given the confidence that Enigma and ULTRA had produced to date, it was not surprising that Eisenhower again turned to this source for confirmation of German "acceptance."

The plan worked beyond expectations. After the war, a former member of BP who became a distinguished historian reviewed the actual intercepts and recalled their impact. "They showed how completely the threat posed by FUSAG and by the absence from the field of a man with General Patton's fearsome reputation mesmerized the enemy," he wrote. "The deception plan to blind him (German Field Marshal Gerd von Rundstedt) to the enormous scope of the breakout had been successfully accomplished. Eisenhower knew—thanks to ULTRA—how incorrect was Rundstedt's assessment of his plans and how weak his hand." □

Foster McLeod is a professional military historian whose special area of interest is World War II strategy and intelligence. He is currently writing a book on Anglo-American strategy. As further readings, he recommends ULTRA Goes to War *by Ronald Lewin;* The Ultra Americans *by Thomas Parrish, and* British Intelligence in the Second World War *by F. H. Hinsley.*

Impregnable Pacific Bastion

The rapidly built-up Japanese fortress at Rabaul looked well-nigh immovable to the Allies planning their ladder-step campaign in the Southwest Pacific.

By Charles E. Kirkpatrick

When General Douglas MacArthur left Corregidor Island in March of 1942, he vowed to return and liberate the Philippines. But as he considered that dramatic promise from the vantage point of his Australian headquarters some six months later, an imposing obstacle loomed before him. That obstacle was Japanese-held Rabaul, a powerful fortress that not only stood in the way of MacArthur's plans, but also threatened the security of Australia and the U.S. Navy's lines of communication across the Pacific. Clearly, Rabaul had to be taken, but how could it be done?

Despite the fact that it had been just a small, insignificant town on the northern end of primitive New Britain Island, Rabaul, in the opening months of the war, quickly became the keystone of Japanese strategy in the South Pacific. The victorious Imperial forces descended on the Solomon Islands chain shortly after the war began, arriving at Rabaul on January 22, 1942. The energetic Japanese quickly overcame the small Australian Army garrison there and immediately began work to transform the sleepy tropical village into an advanced base for further conquests to the south.

The raw material was impressive, and even before the work began, Rabaul was a formidable place. The town sat beside a large protected anchorage, a splendid harbor that could accommodate many thousands of tons of shipping. Although strategically located to block movement up and down the island chain, Rabaul itself was almost inaccessible. New Britain is very close to the equator and its rugged, trackless terrain is covered with extremely heavy jungle. In 1942 there were very few roads on the island, none of which led to Rabaul. The Japanese took over two excellent airfields, the commercial airport at Lakunai and a Royal Australian Air Force field at nearby Vunakanau, and quickly built two more first-class airfields and one emergency strip on the plains around the town. All of the airfields except the latter had modern concrete runways,

On November 2, 1943, as seen in this painting by J. B. Denee, B-25 Mitchell bombers from the U.S. 5th Air force struck Japan's mighty air and sea bastion at Rabaul on New Britain.

One of the few things that General Douglas MacArthur (center, hands in back pockets) and Admiral Chester W. Nimitz agreed upon during World War II was that the powerful fortress of Rabaul must fall.

dispersal areas and taxiways and the ground installations necessary to support a large air force. Throughout 1942, the Japanese continued to build up Rabaul as an advanced base, bringing in many thousands of tons of supplies and basing both the Imperial Army's 8th Army Group and the Imperial Navy's Southeast Pacific Theater Fleet Headquarters there at the port.

Rabaul was poised to support further advances when the mid-1942 Battles of the Coral Sea and Midway deprived the Japanese of the initiative. Those sharp carrier battles put the Japanese Imperial Navy on the defensive—quite suddenly, it no longer had the ships or airplanes to support the Army in further offensives in the southwest Pacific. At the same time, MacArthur instituted the first American landings at Guadalcanal and Buna, placing his foot on the first rung of the ladder that would lead him to the Philippines. Virtually overnight, events transformed Rabaul from an advanced base into a powerful fortress that must hold the Empire's gains in the southwest Pacific and prevent the Americans from carrying the war to the home islands of Japan.

Pacific warfare was preeminently naval warfare, but armies still had an important impact on events by holding onto critical choke points. Therefore, strategically placed fortresses already had figured prominently in the fighting. No one expected a fortress to hold out indefinitely—the purpose of fortified places was to gain time for the defenders to organize themselves for decisive battle while simultaneously trying to upset the enemy's timetable. Eventually, any fort would be taken, unless relieved. Nonetheless, the precipitous fall of mighty Singapore shocked the British Empire and confounded military experts who had confidently expected Singapore to stop the Japanese for some time. Corregidor fared better—Fort Mills and its satellite forts withstood the Japanese attack for the full six months envisioned by the old American war plans and excited the admiration of world. Both fortresses, however, were fighting battles of desperation. They were completely cut off from their supporting fleets, lacked air cover, and had no hope of resupply and relief. The situation for the Japanese at Rabaul was completely different.

Rabaul had all of the advantages that Singapore and Corregidor lacked, but the similarities were as striking as the differences. Rabaul had a magnificent harbor that could serve as a major fleet anchorage, a naval base potentially as good as the one Corregidor guarded at Manila Bay. The Japanese redoubt was located at the end of a protruding land feature, just as were Singapore and Corregidor. Unlike those forts, however, Rabaul was not approachable from the landward side because New Britain was virtually undeveloped. Rabaul's geographical isolation made it secure from the kind of artillery bombardment that finally shattered Corregidor.

The Japanese buttressed the advantages of position with substantial military force. The Rabaul garrison added up to almost 100,000 troops of the Army and Navy, troops that were in first-class condition and that were not going to run out of food. The fall of Bataan and, to a lesser extent, the fall of Corregidor, stemmed from the physical breakdown of the defenders from malnutrition and tropical diseases. But because Rabaul had been stocked as an advanced base, it was amply provisioned for a long siege. To supplement those provisions, the Japanese merchant navy continued to send its ships into the Solomons in the first half of 1943. Rabaul, unlike Corregidor, had an intact line of supply.

Throughout its defense of Manila Bay, Corregidor protected an empty harbor. The remnants of the U.S. Asiatic

Fleet withdrew to the south early in the siege and the Army's coastal gunners simply tried to keep the Japanese Navy from using Manila Bay, one of the finest protected harbors in the entire Pacific. At Rabaul, the harbor was capable of holding up to 300,000 tons of shipping with ease, and was a site of bustling activity. The harbor served the Japanese garrisons in the islands as a base of supply, but also was the home of a powerful striking force. In addition to the merchant shipping, the Imperial Navy staged major elements of the fleet through there—including the fast cruiser squadrons that so surprised the U.S. Navy at Savo Island and the famed "Tokyo Express" that periodically reinforced the Japanese garrison on Guadalcanal and bombarded the U.S. Marines around Henderson Airfield. The Japanese likewise based a strong air force at Rabaul's good airfields. At various times, more than 100 fighters and another 100 bombers operated from Rabaul to attack Allied forces in the Solomons and to support sorties by the Japanese fleet. Better still, Rabaul was within range of the major naval base at Truk and could receive additional aircraft from it when required.

Fortress Rabaul had considerable artillery, just like Corregidor and Singapore, but unlike those forts, Rabaul's artillery was not sited to fire only out to sea. General Hitoshi Imamura emplaced his 43 heavy coastal artillery pieces and 367 antiaircraft guns to protect both the harbor and airfields. By comparison, Corregidor had fewer than 80 antiaircraft guns, all obsolescent, while little of its heavy seacoast artillery could be trained on the Bataan and Cavite shores at all. A strong mobile force of infantry and tanks supplemented the artillery. While there was no road net on New Britain, the roads around Rabaul itself were excellent—Imamura could move his troops quickly and easily to meet any invasion threat. To prevent surprise attack, he buttressed his strong fortifications with a good search radar system that could spotlight an air attack as much as 90 miles away.

Well-sited, amply provisioned, strongly defended by well-equipped troops and supported by strong air forces and ships of the Imperial Fleet, Rabaul was immensely strong—and was shaping to be a very difficult nut for the Americans to crack.

One of the few things that General Douglas MacArthur and Admiral Chester W. Nimitz agreed upon was that the American forces had to capture Rabaul before they could attempt any constructive strategy in the Pacific. Rabaul threatened the sea lines of communication to Australia, which had to be secure before the Navy could operate in the Central Pacific. Aside from threatening communications with Australia, Rabaul stood in the way of MacArthur's plans to move up the Solomons in a steady return to the Philippines. While they agreed that something had to be done about Rabaul, however, MacArthur and Nimitz disagreed violently about who should be in charge and who should get the limited resources to conduct the campaign.

One factor greatly affecting plans to reduce the fortress of Rabaul—as, indeed, with all Pacific operations—was the fact that the United States had committed itself to defeat Germany first. The European Theater had an absolute priority on manpower, logistics and airpower. Navy Chief Ernest King complained bitterly that only about 15 percent of the national military effort was devoted to the Pacific Theater in 1942. It was, accordingly, pointless for MacArthur and Nimitz to make any grandoise plans, but it was equally difficult to see how they could attempt anything against a place as strong as Rabaul without more men and equipment.

Both commanders knew that some sort of action was

PRIMARY GOAL FOR MACARTHUR

Before Rabaul became a Japanese bastion in the Southwest Pacific, it was a mere village on northern New Britain Island held by a small Australian garrison.

Landing at Rabaul and on nearby New Ireland Island January 23, 1942, the Japanese forces quickly overwhelmed the token force of Australian defenders who were garrisoned there.

As Rabaul and Kavieng on New Ireland were built into a major fortress and staging base, General Douglas MacArthur watched with concern, even while the largely American Allied forces fought the bloody battles of Guadalcanal and Papua-Buna on New Guinea.

"Rabaul was the focal point for the protection and reinforcement by the enemy of the whole northeast [Solomons] area which he had seized and occupied," wrote MacArthur in his postwar memoirs.

"Allied victories in Papua and Guadalcanal had temporarily contained him, but did not threaten his main centers of power. My primary goal in 1943 was to cut off the major Japanese naval staging area, the menacing airfields, and the bulging supply bases at Rabaul."

Himself aware that his men and supplies were too limited for frontal assault, MacArthur thus, by his own description, adopted a Rabaul strategy that was not all that different from the "neutralizing" edict issued by the Joint Chiefs of Staff.

In a meeting with his staff, MacArthur later related, he discussed in detail his plan for dealing with Rabaul and other Japanese strong points.

"[I] said I did not intend to take them—I intended to envelop them, incapacitate them, apply the 'hit 'em where they ain't—let 'em die on the vine' philosophy. I explained that this was the very opposite of what was termed 'island-hopping,' which is the gradual pushing back of the enemy by direct frontal pressure, with the consequent heavy casualties which would certainly be involved."

He therefore selected areas lending themselves to development of airfields and base facilities, which at the same time were lightly defended.

"Thus, by daring forward strikes, by neutralizing and by-passing enemy centers of strength, and by the judicious use of my air forces to cover each movement, I intended to destroy Japanese power in New Guinea and adjacent islands, and to clear the way for a drive to the Philippines."

With Rabaul as the cancer to be isolated, the envelopment steps began with seizure of the Woodlark and Trobriand islands to the south in June of 1943.

In December, after Army and Navy air campaigns against Rabaul, Americans surprised the Japanese and landed at Arawe on New Britain's southwest coast.

Late that month, they took Cape Gloucester to the northwest.

In March 1944, Talasea, halfway up New Britain's north coast, was seized, while other nearby islands to east, north, west and southeast of Rabaul and Kavieng also were taken by the Allies.

Rapid construction and use of new airfields in this ring around Rabaul contributed to its growing impotence as the Allies then moved on and left the onetime power center to die on the vine, exactly as MacArthur had said.

Parachute bombs are dropped in this low-level airstrike by Mitchell B-25s upon parked Japanese planes at Vunakanau airdrome at Rabaul, causing great destruction and signaling the end for the fortress.

immediately necessary, too. Now that Japan had lost the initiative, it would be foolish for the United States to grant her a respite to recuperate. But the Pacific had to make do with only a few troop divisions because the Army was concentrating its forces for landings in the Mediterranean and for the future cross-Channel attack on Europe. At the same time, there was a serious shortage of landing craft, which meant that amphibious operations had to remain fairly modest in scope.

The worst shortage, however, was in airplanes. Despite MacArthur's frequent and eloquent pleas for long-range bombers and fighters, Air Force Chief Henry ("Hap") Arnold was determined to build up the strategic air force in Europe. The B-17 Flying Fortress could bomb Rabaul from Australian bases, and the two-engined P-38 Lightning fighter could escort the bombers all the way to the target. But those aircraft, in 1942, were dedicated to the strategic bombing campaign against Germany. Only a few heavy bombers were sent to the Pacific, and the P-38 did not arrive in that theater in any numbers for months. The upshot was that MacArthur and Nimitz had to put off direct operations against Rabaul until they could capture or build airfields closer to New Britain.

To resolve their dilemma, the American commanders decided to tackle the problem of Rabaul step by step. In March 1943, Admiral William F. Halsey, commander of the Navy's South Pacific Theater, met with MacArthur in Brisbane to make plans for taking Rabaul. It was a meeting of two extremely strong personalities, and their staffs feared that the swashbuckling Halsey and the autocratic MacArthur would not so much meet as they would collide. To the surprise of everyone concerned, Halsey and MacArthur took to each other immediately and, despite their differences, quickly hammered out an agreement. The scheme they envisioned was named CARTWHEEL.

Operation CARTWHEEL aimed to reduce Rabaul through a series of 13 separate operations: MacArthur's forces were to move up the New Guinea coast, while Halsey's would attack New Georgia in parallel advances. The idea was to move the limited American air power close enough to Rabaul to support the eventual assault landings. The two attacks would eventually converge on Rabaul which, once taken, would provide a naval operating base for offensives directed against the Philippines. The progress of the fighting in the lower reaches of the Solomons already augured well for the plan to reduce Rabaul. The final American victory on Guadalcanal, involving the destruction of a large number of Japanese Army units, aided the CARTWHEEL plan by freeing troops and ships for use elsewhere in the Solomons. Better yet, the big naval battles occasioned by the Japanese Navy's continuing attempts to dislodge the Americans from Guadalcanal came to a close.

The fly in the ointment was that the United States had decided to attack the Japanese along two major lines of advance in the Pacific. The attack through the Solomons conducted by MacArthur and Halsey was, from the point of view of Admiral Ernest King, Chief of Naval Operations, a side show that had to be continued only because it was politically impossible to abandon—too much blood had been spilled and too many ships had been lost to give up in the Southwest Pacific. Nonetheless, King directed the Navy's priority toward a thrust across the Central Pacific, and the American Joint Chiefs of Staff endorsed his opinion that the Central Pacific offensive should have the higher priority.

As a result, MacArthur and Halsey found their forces being drained off to support attacks on the Gilbert Islands, the first step in the Navy's Central Pacific strategy. Although they vigorously objected to losing their landing

craft, marine assault troops, and aircraft-carrier support, there was little they could do about it. The Navy had been planning just such an attack across the Central Pacific, for it was the essence of the decades-old Orange war plans.

Navy planners believed the Central Pacific offensive offered several very important advantages. First, it would allow the fleet sufficient scope to operate, whereas the waters in the Solomon Islands were constricted and difficult for large-scale actions. In particular, the presence of Japanese land-based aircraft in the Solomons made it very dangerous for the Navy to operate its precious aircraft carriers there. Second, the Navy was convinced that it could attack Japan's vital lines of communications more directly and decisively in the Central Pacific. Finally, and by far most important, King saw the Central Pacific as the place where he could bring his Pacific Fleet into decisive battle with the Imperial Japanese Navy, thereby winning the Pacific war.

In the face of such logic, MacArthur found no audience for his view that an approach to the Philippines through New Guinea and Mindanao offered the advantage of Australia as a base, something the old war plans never considered, and that the geography of the region made it possible to support his advance entirely with land-based airplanes. The Joint Chiefs of Staff made their final decision in August 1943, as part of the Quebec Conference at which the British and American Combined Chiefs of Staff met in order to decide upon further strategy. They crossed Rabaul off the invasion list and ordered MacArthur to isolate, blockade and neutralize the fortress, rather than attack it. The big question was how to do that, short of actually invading.

Until now, the Army Air Forces had compiled a dismal record of failure in the Pacific when asked to bomb the Japanese fleet. The land-based bombers had difficulty finding the enemy ships in the first place, and in the second place the aircrews discovered that high-altitude, precision bombardment was just not very successful when the target kept moving erratically. The B-17 was a rugged and powerful airplane that could survive against the Japanese Zero fighter and demolish land targets with pinpoint accuracy, but it just couldn't seem to hit ships at sea. B-17s dropped more then 800 tons of bombs on 60 Japanese ships between August and November of 1942 and only managed to sink four of them. Looking back over the first two years of war, the Air Force found that it managed to land not more than one percent of its bombs on moving enemy ships.

Part of the problem with the fighting in the Solomons was that the Japanese had been able to reinforce their garrisons at night by slipping destroyers and fast transports loaded with troops past the U.S. Navy's patrols. Although their return voyages had to be in daylight, the Japanese discovered that they had little to fear from the big bombers. If, therefore, the Americans meant to isolate and bypass Rabaul, they had to cut off shipping to that port, as well as keep it from sending troops by sea to keep up the fight in the islands to the south. In order to do this, something had to be done to improve Air Force performance.

It turned out that a new commander was the answer to the problem. General George C. Kenney arrived in the Pacific in mid-1942 to assume command of a discouraged and dispirited Fifth Air Force. Kenney, a strong believer in attack aviation, rapidly went to work to analyze the problem and find solutions. He soon discovered that Army airplanes were simply attacking Japanese ships from too high an altitude—he promptly began experiments with low-level bombing—literally skipping the bombs across the water into the targets. Kenney had the excellent B-25

TOP: General Hitoshi Imamura, Commander-in-Chief of the Japanese Eighth Army in the Solomons and New Guinea, had 43 heavy artillery pieces and 367 antiaircraft guns on Rabaul. MIDDLE: A squadron of American B-25 bombers en route to bomb the Japanese air and naval base at Rabaul, long a thorn in the Allied side. ABOVE: An Imperial Japanese Navy heavy cruiser takes a devastating direct hit in Rabaul Harbor, a magnificent anchorage and naval base potentially as good as Manila Bay in the Philippines.

Mitchell medium bomber, the same airplane that General James Doolittle used on the Tokyo raid. Because the B-25 was ideal for the mission Kenny had in mind, he ordered his commanders to modify the airplane to give it heavy firepower and allow it to carry many smaller bombs. Thus armed, the B-25 crews began a period of intensive training in low-level attacks, flying at masthead height in order to achieve hits.

The modified B-25 had real firepower. Major Paul I. "Pappy" Gunn, a technical wizard who already was a legend in the Fifth Air Force, eliminated the plane's tail guns and ventral turrets, stripped out the noses, and cut the crews to three men. In place of the glazed nose, the bomber now had a package of eight .50-caliber machine guns. Lighter and with a smaller crew, the bomber could now carry as many as six 100-pound bombs and 60 delayed-fuse fragmentation bombs. The field-modified B-25 already appeared to be a deadly ship killer, but North American soon came up with a new production model that mounted a 75mm howitzer in the bomber's nose. As March of 1943 rolled around, Fifth Air Force had a nasty surprise in store for the unsuspecting Japanese Navy.

The test of Kenney's new airplanes was not long in coming. In March of 1943, the Japanese, having lost Guadalcanal, decided to strengthen their outposts. Lieutenant General Adachi Hatazo ordered his 18th Army headquarters and his 51st Division to move from Rabaul along the New Britain coast to New Guinea. Alerted by Allied ULTRA code intercepts, the Fifth Air Force's heavy bombers found Adachi's eight transports, escorted by eight destroyers, near Cape Gloucester and launched the usual high-level attacks with the usual indecisive results. The next morning, though, nearly 100 of Kenney's deadly new airplanes attacked the little convoy at very low altitude and in the course of the day sank all of the troop transports and four of the destroyer escorts. That action, known as the Battle of the Bismarck Sea, March 2-5, 1943, was the first time that an air force had destroyed a fleet by itself, and showed MacArthur that he finally had a proven, deadly naval weapon, albeit one that required good land bases relatively close to the enemy.

The Fifth Air Force then opened the air battle over Rabaul with a bombing campaign that lasted from the second week of October through the first of November 1943. General Kenney wanted to make Rabaul untenable for Japanese shipping and gain control of the air over New Britain. Fifth Air Force, aided by 13th Air Force, put hundreds of planes over Rabaul, generating a series of swirling, intense air battles that hurt both sides. The Japanese defended the port and airfields with a formidable array of antiaircraft guns—twenty 88mm guns, seventy-five 75mm guns, twenty-three 120mm guns, and 249 automatic weapons ranging in caliber from 13.2mm to 25mm. The flak over the harbor rivaled the worst that the U.S. Eighth Air Force experienced in Europe. The Imperial Navy reinforced Rabaul from Truk by sending over most of its carrier-based aircraft, the most important of which were around 100 Zero fighters.

Kenney's flyers did not destroy Rabaul's effectiveness as a fortress, but they did destroy a lot of the naval fighters based there and damage the airfields and harbors. Perhaps most importantly, the air force diverted Japanese attention from the landing operations on Bougainville in the northern Solomons that aimed at securing airfields closer to Rabaul. Recognizing the direction American operations were taking, however, the Japanese responded to the increasing American threat by sending a major naval force to wipe out the invasion fleets that were building the ring around Rabaul. The Imperial Navy sent seven heavy cruisers, one light cruiser and four destroyers to Rabaul, from which they would sortie to attack the American fleet, a fleet without heavy cruisers or battleships. In a desperation move, Halsey sent his carrier task forces to attack the harbor at Rabaul, hoping to catch the Japanese ships there. In two major attacks Navy pilots managed to sink few ships, but they damaged the heavy cruisers, which had to retreat to Japan for repairs. In succeeding counterattacks on the carrier task forces, the Japanese lost more than 30 airplanes at sea and 20 over Rabaul itself.

A unique organization carried out the next series of attacks on Rabaul. Command Air Solomons—Airsols, for short—was a joint-service air force that was commanded at various times by both naval officers and air force officers, including Rear Adm. Marc A. Mitscher and Maj. Gen. Nathan F. Twining. Airsols was a heterogenous collection of airplanes and units, comprising elements of the U.S. Army, Navy and Marine Corps, and the Royal New Zealand Air Force. It undertook the entire gamut of missions in the Solomons: fighter escort for convoys, reconnaissance, air-sea rescue, bombing and frequent night-fighter patrols.

Allied pilots flew some of the best aircraft of the war in those operations, including the F4U Corsair and the F6F Hellcat, both of which were more than a match for the much vaunted Japanese Zero. The reliable Dauntless SBD dive bomber and TBF Avenger formed the hard core of light bombardment, while the B-25 Mitchell continued to be the most important medium bomber in the inventory. Heavy bombardment was supplied by various models of the B-24 Liberator. By the middle of December 1943, the Airsols occupied airfields stretching the entire length of the Solomon Islands, but with key bases at Barakoma (on Vella Lavella), 349 miles from Rabaul; on Torokina, 210 miles distant; on Stirling Island, 279 miles from the fortress, and on Munda and Ondonga, 391 miles and 385 miles, respectively, from the target. Heavy bombers still operated from Henderson Field on Guadalcanal, 562 miles from Rabaul, but staged through Munda. As of December 17, when their offensive kicked off, Airsols had 199 operations fighters, 200 operational medium and light bombers and 99 operational heavy bombers to oppose a total of around 292 Japanese aircraft of all types in and around New Britain. At last the Allies were ready for direct action against Rabaul.

The famous Marine ace, Major Gregory ("Pappy") Boyington, led the first fighter sweep over Rabaul with his "Black Sheep" squadron on 17 December. Little happened on that day, but on succeeding missions a bloody give and take developed that was costly to both sides. Boyington made his reputation, running up a total of 28 kills. (On the other side, Americans noticed a mysterious Japanese ace in an all-black airplane.) The Japanese built up fighter strength at Rabaul to more than 200 to resist the daily strikes by Airsols fighters and bombers, and the daily fight for aerial supremacy routinely involved hundreds of planes and great, sprawling battles. To deal with the Zeros, Americans developed a tactic they called the "Statue of Liberty Play." Fighters timed their arrival over Rabaul to coincide with the bomber's departure, so that they could catch the Japanese fighters landing. Meanwhile, other fighters provided the cover the B-25s, TBFs and SBDs needed in order to destroy shipping in the harbor, the docks and on the Japanese airfields.

Typically, Airsols would arrive early in the morning with a ground attack by fighters, followed by large-scale bombing by around 10 a.m. The bombing would be led by 100 Douglas SBD Dauntless dive bombers, attacking with machine guns and 250-pound bombs from out of the sun.

The second wave of Airsols bombers, 50 to 70 B-25s in all, would approach from different directions and drop their payloads of 500-pound bombs over the already doomed Rabaul harbor, seen at bottom here.

The second wave of bombers, timed to arrive just as the SBDs finished their attack, would consist of 50 to 70 B-25s, all approaching from different directions and dropping 500-pound bombs. The last wave would be a formation of 50 B-24s, dropping 2,000-pound bombs from high altitude. A strong combat air patrol of Hellcats and Corsairs protected the bombers, while Catalina flying boats orbited offshore to pick up downed flyers. Normally, the attack focused on only one target per day, but the attackers relentlessly returned day after day.

The Japanese continued to send airplanes to Rabaul through the first half of January 1944, and the defenses remained strong despite continuing heavy losses. The defenders managed to put up anywhere between 30 and 80 fighters to meet each strike, but that was accomplished only at the cost of draining airplanes away from the new squadrons at Truk in the Central Pacific. All of this, of course, was perfectly satisfactory to the U.S. Navy, even then planning its attack on the Marshall Islands. The more airplanes the Japanese committed to Rabaul, the fewer there would be to threaten aircraft carriers in the Central Pacific theater.

The real climax came on 17 February, when the U.S. Navy launched its unexpected strike at the naval base at Truk, Japan's "Gibraltar of the Pacific." Reacting to the devastation the carrier planes wrought there, the Japanese High Command abandoned the air defense of Rabaul completely. From the middle of February onward, the Airsols' task was accordingly a much simpler one. They had only to deal with the antiaircraft fire and began to try to destroy all of the Japanese batteries. Although the bombing over Rabaul became something of a "milk run" to the crews, they continued to be wary of the extremely effective flak. The defenders built their battery positions very carefully and moved the guns around to confuse the bombers. The result was that the Airsols never managed to destroy more than half of the guns.

Despite the failure to suppress the antiaircraft, the Airsols' offensive had managed to reduce Rabaul to virtual impotence as a base with any sort of offensive capability. Barges remained in the harbor, but the thousands of tons of merchant shipping and the powerful units of the Imperial Navy had long vanished. The Japanese worked diligently to repair bomb damage to the concrete airstrip around the harbor, but there were no airplanes to operate from them. Supplies remained in storage, but there was no way to distribute them, and Airsol pilots began a concerted attempt to find and destroy all of the depots on the fortified peninsula.

Although it was clear to the Japanese at Rabaul that they were isolated, General Imamura ordered his men to get to work and prepare for the landings they expected to follow. From the end of February 1944, his 100,000 men stayed busily at work strengthening fortifications, digging tunnels, planning and building beach defenses, devising new weapons, and growing fresh food. It is clear that the decision to bypass Rabaul was a wise one, for the garrison was well prepared for any invasion. As the Navy's historian of the campaign, Samuel Eliot Morison, observed, "Tarawa, Iwo Jima and Okinawa would have faded to pale pink in comparison with the blood that would have flowed if the Allies had attempted an assault on Fortress Rabaul." Unfortunately for the Japanese, the attack never came—Imamura handed over his sword in surrender on Sep-

TOP: United States aircraft converged from all directions on the powerful, important Japanese naval base and air station at Rabaul (seen here.) MIDDLE: An F6F Hellcat is seen here descending on an elevator to the hangar deck of the U.S. aircraft carrier Saratoga *after a raid on Rabaul, while other Hellcats are jockied into place on the deck. ABOVE: Glad tidings of a resounding victory are shared by American Navy aircraft carrier officers after the conclusion of a dangerous air raid against heavily defended Rabaul.*

tember 6, 1945, as commander of a still-powerful redoubt that the war had passed by.

Hindsight tells us that the Joint Chiefs of Staff were right and MacArthur was wrong. Bypassing Rabaul was the correct decision, both because it saved lives and because MacArthur found other bases to support his reconquest of the Philippines. The interesting aspect of the entire campaign is the use to which the Allies put air power to isolate and reduce a strong enemy base. We should note that air power did not demolish Rabaul or cause it to surrender—to the very end Rabaul was an extremely dangerous bastion. But it did eradicate Rabaul's offensive capacity. The Allies' strong air force made the harbor useless to the Japanese Navy and finally eroded Japanese air strength in the Solomons to the point that it could no longer put up any real resistance to the repeated bombing attacks.

While the Airsols demolished the enemy's air power in the Solomons, they took serious losses in the process. Allied records admit to 136 airplanes lost between November 1943 and March 1944, along with such aces as Pappy Boyington, who finished the war as a prisoner of the Japanese. Some Japanese sources claim even greater losses, however, citing U.S. documents that admit 435 aircraft were lost in raids over Rabaul, and going so far as to claim a real total of over 800 destroyed. The correct totals are likely to remain obscure, but it is clear that both sides sacrificed many pilots and aircrews in the dangerous skies over Rabaul.

As for assessment of the effectiveness of the bombing, the American Strategic Bombing Survey counted a total of 29,352 sorties flown over Rabaul, and a total of 20,967 tons of bombs dropped on the fortress during the entire period from early 1942 through the end of the war. Japanese calculations after the war showed that the Allies produced one battle casualty per 5.6 sorties or 4.05 tons of bombs dropped—a very inefficient way to wage war. Fortunately for the Allies, they were not trying to destroy the Japanese ground troops, but to make it impossible for Rabaul to undertake offensive warfare again. In that aim, they succeeded.

From the Japanese point of view, the aerial offensive pointed up the fact that an overseas base must be supported by a navy and air force that can control the surrounding area. From the middle of 1942 onwards, American strength in the Pacific steadily increased, while Japanese strength just as steadily decreased. Determined offensives aimed at Japanese bases such as Rabaul forced the Japanese to employ the Imperial Navy defensively, and the swing of the pendulum in air power toward the Allies meant that the Imperial Navy's losses would be increasingly hard to bear. In the long run, the fighting in the Solomon Islands, of which Rabaul remained the focus, imposed a drain on Japanese air and naval power that the Empire could ill afford and made it much easier both for MacArthur to succeed in his drive toward the Philippines and for Nimitz to resolutely blast his way across the central Pacific Ocean. □

Charles E. Kirkpatrick, a historian with the U.S. Army's Center of Military History, is the author of Archie in the AEF: The Creation of the Antiaircraft Service of the U.S. Army, 1917-1918. *Suggested readings:* Cartwheel: The Reduction of Rabaul, *by John Miller, Jr., a volume in the series* The United States Army in World War II *(Washington, D.C.: Office of the Chief of Military History, 1959);* Breaking the Bismarcks Barrier 22 July 1942-1 May 1944, *by Samuel Eliot Morison, Volume VI of the History of the United States Naval Operations in World War II.*

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Final volume in a combat historian's classic tale of biography and military history.

By Alexander S. Cochran, Jr.

On OVERLORD D-Day, U.S. Army Sergeant Forrest C. Pogue waded ashore in the initial infantry wave at Omaha Beach. But his mission was other than combat. Possessing a doctorate in history, he was assigned to Colonel S.L.A. Marshall's ETO (European Theater) Historical Section. Combat-historian Pogue's task was to begin the historical coverage of what was to become one of the U.S. Army's greatest victories. While most American infantrymen on the beach chiefly were concerned with holding off the Germany counterattack, Pogue began to interview wounded GIs awaiting evacuation, obtaining a firsthand view of D-Day combat. As the Normandy beachhead was secured, he continued to move forward with the front-line soldiers, interviewing GIs and generals alike. Thus did America's most eminent World War II historian begin his lifelong study of this mighty endeavor.

George Marshall was virtual generalissimo of the entire Allied war effort in both Europe and Asia. Here, an antiaircraft unit scans the sky for potential attackers.

After V-E Day in 1945, Sergeant Pogue returned to England and began a study of General Dwight D. Eisenhower's command, Supreme Headquarters Allied Expeditionary Force (SHAEF). Within a year, he was a civilian historian with the U.S. Army Office of the Chief of Military History, where he continued his interviews and research. Several years later, he published the official history of SHAEF, *Supreme Command*, which earned quick acceptance as one of the finest volumes in the "green book" series, the official United States Army in World War Two series.

The balance and clarity with which he treated his complex topic came to the attention of the wartime Army Chief of Staff, General of the Army George C. Marshall. The General then selected former sergeant Pogue as his authorized biographer.

The designation was crucial, since Marshall long before had determined that, contrary to most other World War II military leaders, he would not write an autobiography of his wartime experiences. Rather, he would place all his personal papers at the disposal of an historian who would combine them with the official records to develop the full Marshall story. To supplement the written record, Marshall would discuss his life with the historian. The arrangement was very much in character with the unassuming nature of the five-star general, while his confidence in and selection of Forrest C. Pogue proved to be a most fortuitous one.

Since being designated as Marshall's authorized biographer, Dr. Pogue has devoted his life to the study of the General, initially as the Director of the Marshall Library at Lexington, Va., where the General's personal papers are now stored, and then as the Director of the Dwight D. Eisenhower Institute of Historical Research in Washington. During the decade between Pogue's selection and Marshall's death, the two developed a warm personal relationship that resulted in a remarkable series of interviews, with the historian probing for insights and detail that documents and papers could not reveal and the General providing the rationale and background essential to the story. Additionally, Pogue has subsumed himself in the documents and records of Marshall's life.

His mastery of these records and the related events was evident from publication of the first volume of Marshall's biography. To date, he had published three brilliant volumes taking the General from his early childhood days through the period as World War II Chief of Staff. All were critically acclaimed as historically definitive and popularly received as gracefully written. And now comes the final volume in the series, *George C. Marshall: Statesman, 1945-1959* (Viking, 1987, $29.95), which covers Marshall's post-World War II career.

The decade after World War II was, in many ways, an extension of that conflict. Many of the issues that spawned the war continued to loom ominously, still unresolved. No doubt, it was the fear that the war had not really ended that led President Harry S. Truman to call twice upon the experience, judgment, honesty and vigor the World War II Army Chief of Staff to deal with these issues. Marshall had long planned to retire from public service when the war was concluded after his six-year wartime tour in Washington. But Truman gave him only one week's respite after Marshall relinquished his Army reins to Eisenhower in November 1945 by appointing Marshall as Special Ambassador to China. For the next ten years, he continued to serve his country at the top, first as Secretary of State and then as Secretary of Defense.

After his mission to resolve wartime problems in China failed, he turned, as Secretary of State, to the unresolved wartime economic turmoil of Europe. From his vision came the Marshall Plan, which played a vital part in restor-

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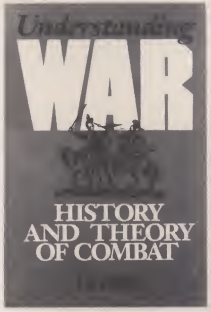

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ing the European economy and preventing World War II from again breaking out. Wartime problems persisted in Germany and Greece as well as in Palestine and the United Nations organization. From these problems came far-reaching solutions—the formation of NATO and various uneasy expedients fashioned at foreign minister gatherings. On all of these issues, Marshall left his unassuming but dominant mark before, in 1949, he again retired from public service—temporarily, it turned out.

This respite lasted less than a year—just enough time to cope with nagging medical problems and begin personal reflections—before Truman again recalled him for one last responsibility, this time as Secretary of Defense. Postwar unification of the military services had gone poorly and what was clearly needed was the same detached but firm leadership that Marshall had provided during the war. In the midst of this, the Korean War broke out, the Chinese invaded, and General Douglas MacArthur was relieved. Again, Marshall's steady hand proved critical.

In 1951, he retired for the last time with but eight more years to live. He began his biography project with Pogue while silently enduring the initial rage of the MacCarthy era. In 1953, a grateful world acknowledged the Marshall Plan with the Nobel Peace Prize. But tragically, Marshall's health began to fail. He died quietly in his sleep in October 1959 at Walter Reed Army Hospital after a stay of almost a year.

In this last volume, Pogue concludes the Marshall story with his usual balanced and sensitive treatment of one of the century's great statesman, moving gracefully through a narrative of the events themselves and discussion of Marshall's impact. Pogue's focus is on Marshall but he never loses the perspective of time. Marshall had many strengths, but surely one of his greatest was never to lose perspective. So, too, his biographer. As before, Pogue is as fair and just in his treatment of his subject as his subject himself was in life. Pogue has provided the final volume of a classic in biography and military history.

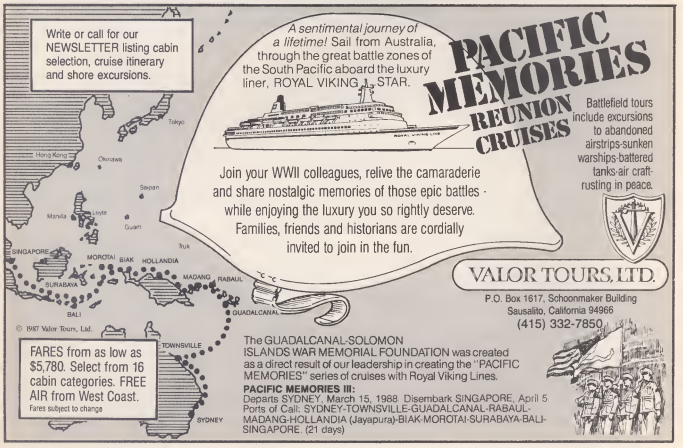
Battle for White Russia: The Destruction of Army Group Centre—June 1944, *by Gerd Niepold, Brassey's, 1987, $48.00.*

Gerd Niepold's is an excellent analysis of the German Army's greatest defeat of World War II. A German officer who himself took part in the battle, he reveals in clinical detail how the Soviet Army, by absorbing all the lessons imparted to it by the Germans between 1941 and 1943 and deploying overwhelming strength on land and in the air, operated a breathtaking *Blitzkrieg* in reverse that totally shattered the Germans' central defense in Byelorussia and lay bare the way to Berlin. In the process a major segment of the German fighting machine was decimated, a far greater catastrophe for the Germans than Stalingrad.

Thousands of books have been published in America and Great Britain about the Normandy landings and the fighting in France that took place at the same time. Compared with the White Russian annihilation battles, the West's land effort was puny. The German Army was destroyed on the Eastern Front, yet in the West hardly anything is known of these titanic and epic battles. This volume rectifies a huge gap. There are no photographs, but, most refreshingly, the book is amply supplied with detailed and clear maps listing *every* town fought over, as well as illustrating each stage of the Soviet onslaught simply and graphically.

There are some printing errors that sloppy editorial work has failed to correct in the text, but this slipshod work does not prevent Niepold's history from being an outstanding study.

Peter C. Smith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Armament

Continued from page 8

President agreed, and on July 25, 1945, Stimson signed the order to drop the first atomic bomb on Japan.

Even as Oppenheimer supervised the installation of the final component into the Trinity device (Fat Man) at Los Alamos on the morning of July 16, Little Boy, the less complex, uranium projectile weapon, was on its way to Colonel Paul Tibbets' 509th Composite Bomb Group on Tinian Island. Accompanied by seven security vehicles, the bomb began its trip on July 14 packaged in a wooden crate with one ancillary metal cylinder, and was driven from Los Alamos to Albuquerque. There, it was transferred to a C-54 cargo plane for the flight to Hamilton Field, Calif., 20 miles north of San Francisco. On the morning of the Trinity test in New Mexico, the bomb, less on uranium subassembly, was loaded aboard the cruiser *Indianapolis*, and it then sailed for Tinian. Ten days later, after a brief intermediate stop in Hawaii, Little Boy arrived at Tinian, where it was joined by a team of Los Alamos scientists with the uranium "slug" in its 300-pound lead cylinder. Unlike the bomb, the scientists and the uranium subassembly flew to the island from San Francisco aboard two specially prepared transports.

For the next ten days, Manhattan Project scientists assembled and tested the bomb. On 5 August, Little Boy was taken to a specially built loading pit in one of Tinian's taxi-ways and the *Enola Gay* was positioned to receive the cargo. Little Boy, weighing nearly 5 tons, ten feet in length, and tapered from 1.5 to 2.5 feet in diameter, was carefully hoisted into the B-29 aircraft. The only operation left undone was the insertion of the uranium plug and two arming devices once the aircraft was safely on its way toward Japan. Although Maj. Gen. Leslie R. Groves, the Manhattan Project's military commander, had opposed in-flight insertion as unnecessary precaution, he was overridden by scientists concerned about safety in the event of a crash on take-off.

At 0245, 6 August, 1945 (Tinian time), Colonel Paul Tibbets eased *Enola Gay* off Tinian with its atomic cargo and banked to rendezvous with escort craft. Fifteen minutes later, the uranium plug was inserted in the bomb and at 0730, nearly five hours after take-off, two red arming plugs were installed. Twenty-five minutes from Hiroshima, at 0847, Little Boy's electric fuses were tested and the bomb was declared ready to be dropped. Tibbets ordered his crew to "Put on your goggles," and at 0915½, the bomb was released. Seconds later, Tibbets heard his copilot exclaim "My God, look at the sonofabitch go!"—although later he wrote in his log book, "My God, what have we done?" The tail gunner radioed Tinian and reported, "Target visually bombed with good results."

The *Enola Gay* turned for Tinian, her mission completed.

America's only remaining atomic weapon, Fat Man, arrived at Tinian by air on 7 August and like Little Boy was joined there by a separate critical assembly. Sixty inches in diameter, nine feet long, and weighing nearly six tons (loaded weight), the implosion device was loaded aboard Major Charles W. Sweeney's *Bock's Car*, another B-29, on the evening on 8 August.

Unlike Little Boy, however, the more complex Fat Man was fully assembled prior to take-off. Despite a faulty fuel pump for the plane's reserve fuel tank, Sweeney eased the B-29 off Tinian toward a rendezvous point over the island of Yaku-shima. Although finding only one other bomber, *Bock's Car* turned toward the primary target of Kokura at 0950. After three unsuccessful runs—clouds obscured the target area—Sweeney decided to attack the alternate target at Nagasaki. After a 20-second bomb run, Fat Man was dropped at 1150, and the crew returned to Tinian after refueling at Yontan Field, Okinawa.

Five days later Japan surrendered, and American planners prepared for life in the atomic age. The impact of strategic bombing during the war played heavily on post-war planners. Since strategic bombing often was credited with bringing down the Axis, it was only natural to envision it as the logical mission for atomic weapons. Besides, in 1947, there was only one type of atomic weapon—large, heavy bombs—and there weren't many of them. A military planner could count on having at his disposal no more than 13 bombs and less than 15 specially trained flight crews to man the Air Force's 30 modified B-29s.

While the stockpile consisted of only one type of weapon in 1947, the Air Force had only one organization to employ it—the 509th Composite Bomb Group (code name SILVERPLATE), the same group that dropped the atom bombs on Hiroshima and Nagasaki. Based at Walker Air Force Base in Roswell, N.M., the 509th was one hour's flying time from its weapons stored at Sandia Base in Albuquerque.

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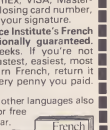

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Today this situation seems untenable, but in 1947 it was one of SILVERPLATE's lesser problems. Although it would require several hours to fly to Sandia Base and load the weapons, it required a specially trained team of 39 technicians more than two days to assemble and test a single bomb. But even this was not the worst planning problem. Once assembled, the bomb was only good for 48 hours before its internal batteries became too weak to function reliably.

Beginning in the fall of 1948, and coinciding with Lt. Gen. Curtis B. LeMay assuming command of the new Strategic Air Command, the Air Force undertook a dramatic program to improve its nuclear capabilities. Before that time the entire American stockpile consisted of MK III Fat Man bombs. It was not until late 1948 that the MK IV bomb joined the arsenal. The MK IV weighed 10,900 pounds, was one inch larger in diameter than was the MK III, but equipped with improved fusing and safety features. But, even with the MK IV, the atomic arsenal still had only a single type of weapon, the free-fall gravity bomb.

Under LeMay's stewardship the Air Force acquired 235 additional nuclear-capable bombers in the next two years, an increase of nearly 800 percent. This growth in capable bombers would not have been necessary, however, if the number of atomic weapons had not also grown. Capital investments in nuclear processing and production facilities in the late 1940s were beginning to pay dividends. When LeMay assumed command of SAC in 1948, there were less than 50 atomic bombs available for his potential use. By the end of 1950, there were more than 450.

At the end of World War II, U.S. atomic-weapons production proceeded at a snail's pace. Severely hampered by availability of materials and limited facilities, military requirements far exceeded the number of weapons. The early weapons were large, heavy and complex—they required vast quantities of scarce materials. As technology allowed the production of more efficient, smaller weapons, the size and complexion of the stockpile began to change. Engineers designed warheads that used less active material and, as a result, a greater number of warheads, of a wider variety were manufactured. Thus, technology changed stockpile philosophy from "This is what I can build," to "What are your (the military's) requirements?"

On 3 September 1949 an American B-29, fitted for weather reconnaissance, detected unusually high levels of airborne radioactivity 18,000 feet above the northern Pacific. Two days later, another B-29 detected similar radiation between Guam and Japan. During the next few days special flights of high-altitude aircraft tracked the radioactive cloud as it drifted eastward. Special air sampling filters aboard the aircraft produced startling results. The filters held isotopes of barium and cerium, products of an atomic detonation.

Six days after the unexpected discovery, the Central Intelligence Agency informed President Truman that air samples indicated the Soviet Union had exploded an atomic bomb. Although the President knew the Russians were working feverishly on their bomb, intelligence sources predicted they would not have an operational device until 1952. Truman asked scientists at Sandia Laboratory, and advisers in the Pentagon: "Are you sure? Are you sure?" They were—they called the Russian explosion Operation Joe for the Soviet dictator Stalin. After additional confirmation, the President, on September 23, publicly announced the successful Soviet test.

The news produced both surprise and alarm. The Soviets had joined the Atomic Club and Truman could no

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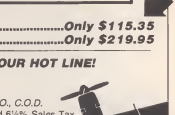

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longer rely upon an American atomic monopoly to keep them in check. This was especially disheartening since American intelligence agencies were also then in the habit of overestimating Soviet Strengths and capabilities.

In addition to improved technology, increased tensions with the Soviet Union and the successful detonation of the first Soviet atomic weapon in 1949 spurred the growth of the American arsenal. Combined, these circumstances fueled President Truman's desire to strengthen national defense, and in 1949 he ordered the Strategic Air Command to include the concept of atomic "retarding attacks" against the Soviet Union in its war planning.

Early the following year, Truman formalized his plan for American defense with a rearming of the country with conventional and atomic weapons. The rearmament effort was pursued with a vigor unseen since the mid-1940s and resulted in Truman directing the Atomic Energy Commission to secure an "overwhelming atomic superiority." This dictate brought new life to one of the Manhattan Project's long-shelved projects, thermonuclear weapons, and led the way for development of tactical atomic weapons. Although the impetus to field tactical weapons came from the

"The bomb will never go off," predicted Admiral William D. Leahy—but it did.

President, the idea for these smaller weapons belonged to Oppenheimer, who proposed them as alternatives to thermonuclear devices and as a means to diversify the American arsenal.

By 1951, technological advances had made it possible to reduce the size of an atomic warhead (thus making it available for new applications) and reduce the amount of fissile materials required in each warhead. This gave Oppenheimer's group the opportunity to diverge from strategic bombing and more efficiently put to use increasing amount of fissile materials that were becoming available. At last, America was producing enough material to expand the arsenal's composition and, before year's end, the Air Force lost its monopoly on nuclear-weapon delivery. With the acceptance of tactical weapons, the Army won the mission of deploying tactical artillery and atomic-tipped rockets and small missiles.

In January 1954, President Dwight Eisenhower reconfirmed the nation's reliance on atomic weapons and announced his own New Look policy. This strategy relied almost entirely on American nuclear superiority and massive retaliation to blunt Soviet aggression. At the same time, the President authorized the Joint Chiefs to include strategic and theater nuclear-weapon employment in national war plans.

Helped by the 1957 release of the top secret Gaither's Report that warned of a growing "missile gap" with the Soviet Union, massive retaliation remained the bulwark of American strategic defense until President Kennedy replaced it with the still-current policy of flexible response. □

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This battle will remain in military history as significant a battle as Gettysburg and Waterloo. Moreover, the Guadalcanal campaign was a six-month intense bloody land struggle, vicious air battles, and a series of the most deadly naval actions in modern times. Guadalcanal not only brought the invading forces to an abrupt halt but initiated their destruction. The Solomon Island Campaign made certain this destruction took place.

First, to memorialize the Marines, Navy, Army, Air Corps, Coast Guard, Merchant Marines, and our Allies, plans are being made for a showcase tour of such battle sites as Red Beach, Henderson Field, the Ilu River Delta, Edson's Bloody Ridge, the Matanikau River, the Bloody Ridge at Fighter Strip One, Mt. Austen, Cape Esperance, and other key areas.

Recently, land at Skyline Ridge on Guadalcanal was purchased from the Solomon Island government to build a memorial to honor the entire Solomon Island Campaign and the men and women who served there.

In addition, the Medal of Honor awardees for valor at Guadalcanal will be memorialized on bronze plaques to be placed at Henderson Field and aboard the aircraft carrier U.S.S. Guadalcanal. Also, all ships sunk to Iron Bottom Bay will be honored in a similar manner. Most of all a very impressive monument will be placed at Edson's Bloody Ridge, a memorial of such beauty and grace that it will attract world attention. Quoting H.C. Merillat, Author of *Guadalcanal Remembered* stated; "Guadalcanal will not die out of the memories of this generation. It will endure in honor."

Help us memorialize the sacrifice of our comrades in arms: our Marines, Army, Navy, Air Corps, Coast Guard, Merchant Marines, and our Allies, the Solomon Islanders, the Australians, the New Zealanders, the Fijians, and the New Guinea "Police Boys." Together we defeated the finest our enemy put forth.

Robert C. Muehrcke, M.D., F.A.C.P.
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Personality

Continued from page 10

in fact, that in the end his father saw fit to resign his commission in order to work for the "Plymouth Brethren"—a notably stern and tiny sect.

Missionary and church affairs accordingly dominated the household in which Wingate was raised. Like many men of his era and class, Wingate was taught at home as a child, in his case for largely religious reasons—to keep the family faith bright and pure. As a result, he went off to "public" school thoroughly steeped in Biblical lore. He then attended the Royal Military Academy at Woolwich, where he compiled an indifferent record, so moody, unkempt, and taciturn that on one memorable occasion he was singled out for special hazing, in the cruel tradition of English school life. Wingate took his gauntlet at a walk, however, not at the customary howling run, and fiercely stared his tormentors down—a first earnest, perhaps, of things to come.

However that may be, the future Wingate began to come to life only when he gained his commission and was assigned to the Sudan in 1926. He had set himself to learn Arabic, and made good progress with the difficult tongue. Arabists were always of use, and in relatively short order Wingate found himself in the Sudanese "bush." He served there, on and off, until 1933, doing a bit of exploring toward the end of his stay, and making the beginnings of a name for himself.

The formative experience of his life, however, occurred on his next tour of duty in foreign parts. The Balfour Declaration of 1917 had decreed a "national home" in Palestine for the Jews, and then, as now, the Jewish presence in the Middle East aroused Arab ire. During the period between the wars, Britain administered Palestine on behalf of the League of Nations, and though the task of peace-keeping was not at that time so difficult as later, it was plenty difficult enough. Because of his background in Arabic, Wingate was assigned to the region in 1936—shortly after landing in Haifa, he found himself, to his surprise, a Zionist. Indeed, an increasingly passionate Zionist. Wingate was never the man for half measures, but his Zionism was something special and quickly became the ruling obsession of his life.

This was, at the time, an unusual position for a British officer to adopt. Not that the British were anti-Semitic, on the whole. They were just pro-Arab. Wingate, however, saw things very differently. He believed that the Jewish settlers would make first-rate soldiers when trained. And he wanted badly to train them, a problem. Though at the time Galilee was suffering from a series of Arab raids—small-scale terrorism and sabotage—British policy held that arming the Jews would only polarize the situation. A more or less underground Jewish defense force, the Hagana, had been formed, but in conformity with British policy, had done nothing to strike back against its enemies. Wingate proposed to change things and persuaded his superiors to authorize the formation of "Special Night Squads." These were combined British and Jewish defense forces patrolling and fighting terrorist bands, and in leading them Wingate proved a capable trainer and leader of soldiers in "irregular" operations. Though the Night Squads were disbanded after Wingate left Palestine, in a real sense they laid the foundation for later Israeli military power.

It was, paradoxically, his Zionism which persuaded him to leave Palestine. In 1938 Chaim Weizmann requested Wingate's assistance as a lobbyist in London, and Wingate accordingly asked for leave, only to find himself, once home, under a cloud for his political agitation—most unseemly

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for a man who held the King's commission, and all the more so since it was falsely rumored that Wingate had openly counseled Jewish rebellion against British rule.

While in London, though, Wingate made a contact which was to hold him in very good stead. In November 1938, Wingate met Winston Churchill at a birthday party and impressed him favorably, an opinion which would prove crucial to the success of Wingate's later career.

Wingate's dream, once the war began, was to lead a Jewish army against Hitler, but his superiors saw to it that he was assigned to other, less controversial, theaters. Nevertheless, in Palestine he had gained a modest reputation as a counter-insurgency leader, and it was decided to put his talents to use in operations against "Italian East Africa"—Ethopia.

British policy was to evict the occupying Italians and restore the Emperor, Haile Selassie. Ethiopia was, at that time, all but surrounded by British colonies (some felt that Ethiopia might make a fine British colony, too), and the task did not prove inordinately difficult. Early in 1941, a multipronged advance was launched from Kenya, from British Somaliland, and from several places in the Sudan. To Wingate fell the honor of taking in the Emperor himself, in company, as seemed fitting, with a brigade of Ethiopian troops under British command. This was Wingate's "Mission 101," soon renamed "Gideon Force," in conformity with Wingate's abiding Scriptural ideals.

In January 1941, Wingate crossed into Ethiopia from the Sudan, his assignment to disrupt communications and tie up Italian troops in the Gojjam Uplands northwest of Addis Ababa in order to smooth the passage of the main British columns operating elsewhere. In the event, however, Gideon Force more than fulfilled its assignment, and in a series of battles and skirmishes taking place in February and March at places like Burye, Mankusa, and Debra Markos, Wingate's Ethiopian irregulars all but cleared the region before them of Italians. Always outnumbered, Wingate's men bluffed and maneuvered to near perfection, intimidating and scattering their already demoralized foes. By April 6, Lt. Gen. Sir Alan Cunningham had swept from Kenya through Italian Somaliland and taken Addis Ababa itself. On May 5, Wingate led the Emperor's triumphal march into the capital—riding in person at the head of the column, literally mounted upon a white charger.

His star had risen very high, and

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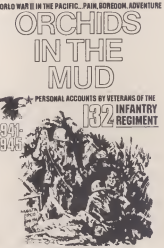
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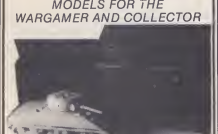

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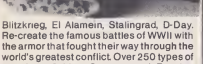

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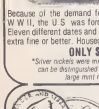

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rose even higher a few weeks later when at the fortress of Agibar his 2,000 men forced the surrender of more than 8,000 Italian-led troops.

Wingate was nothing if not suspicious, however, and just as he feared that back-handed political machinations would deprive the Jews of their promised homeland, he feared that imperial ambition would undo his work in Ethiopia and leave Haile Selassie as the junior partner in some unholy Anglo-Abyssianian consortium. As always, he confided his views to paper and, as almost always, his outspokenness, not to say rudeness, quickly got him into trouble. His Ethiopian memorandum was tactless even by Wingate's relaxed standards. Few junior officers escape with impunity after referring publicly to their superiors as "military apes." Wingate was lucky to get off as lightly as he did for his indiscretion.

That is not how he saw it, however, and to make matters worse, on returning to Cairo, he was effectively demoted, a major again. With operations in Greece a debacle and Crete new-fallen to the Germans, no one seemed to care very much what Wingate had done in the few months just past. And then he succumbed to malaria. Always prone to bouts of depression, Wingate drifted ever deeper into fever and funk. And on July 4, 1941, he attempted suicide.

It is testimony to the high regard which he had earned in spite of all—and to the great power of his personal connections—that Wingate was ever reinstated after such a lapse.

Most helpful to him at this stage in his career, preserving him from a tame assignment in Dorset as an antiaircraft commander, was Sir Archibald Wavell, who had known and respected Wingate since his days in Palestine. Wavell had been transferred from Mediterranean command to the Far East, and in February 1942, he decided that he needed Wingate.

By the time Wingate arrived, Rangoon had fallen to the onrushing Japanese, but in relatively short order he found himself in a congenial position, overseeing an already established "Bush Warfare School" and training his men in north central India for jungle forays into Burma.

Behind enemy lines into Burma, for by the summer of 1942, Burma lay completely in Japanese hands. The British Indian Army, in fact, had suffered the most thorough defeat in its long and generally glorious history. "Impregnable" Singapore had fallen some months before, and India itself seemed in imminent peril. A few more

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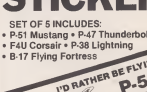

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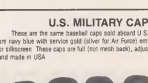

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Japanese conquests, and the Asian Empire would be at an end. The British badly needed a victory—for the sake of morale, if nothing else, and to quiet the threatening murmurs from the great Subcontinent which lay at risk. To *bequeath* independence was one thing, to relinquish the country to revolt or a foreign foe quite another.

Wingate was a proven guerrilla warrior. Perhaps he could gain some striking success. That, in any case, seems to have been the hope which led to his appointment. And in his own way, Wingate fulfilled it. He did not exactly win a victory in his first Chindit expedition. But he led his men on foot to adventures far behind Japanese lines, tied up communications for a while, did a bit of damage and, best of all, managed to get out again with more than two-thirds of his men alive and present for roll call. He had proved that the Imperial Army could come up with jungle fighters, could match, or nearly match, the Japanese at their own game. Under the trying circumstances, that was victory enough. And Wingate gained corresponding laurels.

His real success, in short, was more geopolitical than military. This is not to say that Wingate was not an innovative and able commander—his reliance upon radio communication and his decision to supply his columns by air represented something new and effective. It is rather to say that the furor that followed his return had more to do with politics than with the discomfiture of the Japanese. Anything other than utter defeat would have been most welcome at the time. Wingate's raid did better than that, and shone all the brighter for it—shone all the brighter at least in England.

Nearer the front there was controversy. Most staff officers on the spot did not like Wingate in the first place, and on purely military grounds, they were not much impressed by his feat. In that sense they may have been wrong, but wrong or not, they certainly—perhaps jealously—underestimated its wider importance.

Churchill, for one, felt quite otherwise. According to the Prime Minister, Wingate was "a man of genius and audacity," and in England the term "Chindit" soon became a household word. (Wingate was always careful in naming his operations, and the term "Chindit" seems to have been chosen in commemoration of the intensely stylized stone "lions" which preside over Burmese temples in order to frighten wicked spirits away. The lions, in Burmese, are *Chinthé*, and the idea apparently was that Wingate's men, too were *Chinthé*).

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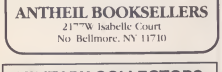

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The magnitude of Wingate's reputation received stunning confirmation a few months after his return from the jungle on April 27, 1943. In late July he was called back to England, arriving in London on August 4. That very night he dined with Churchill, and was thereupon invited on impulse to accompany the Prime Minister to the Quadrant Conference in Quebec. The party left by sea the following morning.

In Quebec the presence of Wingate proved very valuable to the British. The American delegation, always more interested in the Pacific theater than the British, had been sorely irritated by what they perceived as Britain's dilatory performance in prosecuting the Far Eastern War. In particular, the Americans were irked by the seeming unwillingness of the British to mount a viable Burma offensive, needed to open a supply route to China. The British felt that defeating Hitler far overrode all other priorities. Nevertheless, to preserve Allied amity, something had to be done in the Far East—and the presence of Wingate was a tangible reminder that something was in fact *being* done. All the better—at least so far as the British High Command was concerned—was being done on the cheap, since Wingate's Long Range Penetration Groups were inexpensive and small.

Conditions thus played into Wingate's hands, and he was at no point in his career the man to let a tactical advantage slip, either in the field or at the negotiating table. He left Quebec utterly triumphant over the staff naysayers back in New Delhi, with authorization in the highest quarters for a vastly expanded Chindit program enjoying full American air support.

Wingate's second foray into the jungle, like his first, originally was designed to work as part of a many-pronged offensive. And again like his first, things turned out rather differently than had been planned. The scheme outlined in Quebec and perfected at the Sextant Conference in Cairo called for an amphibious assault on the Andaman Islands, for British advances along the coast and in central Burma, for a Sino-American offensive under General Joseph Stilwell directed toward Myitkyina in the north, and finally for an advance from Yunnan to be conducted by the Chinese troops of Chiang Kai-shek. Wingate's Special Force was supposed to land behind Japanese lines in gliders, to cut off the railway running from the south to Myitkyina near a place called Indaw, and to set up a series of "strongholds" from which to conduct guerrilla operations against the Japanese, once again

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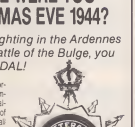

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disrupting communications and tying up troops.

At the Tehran Conference in late November, however, the amphibious operation was dropped in order to concentrate power for the Normandy invasion. This decision so incensed Chaing that he refused to commit his Yunnan forces. Furthermore, in March 1944, the British offensive in Central Burma was pre-empted by a major Japanese attack at Imphal. The British coastal operation and Stilwell's advance from Assam, however, progressed more or less according to schedule. This was encouraging, but even so, by the time the main body of Wingate's men was scheduled to depart by air (one of his three brigades had begun to march in overland), conditions had changed so greatly that it took all of his ingenuity to keep Chindit II, or Operation THURSDAY, from being scrapped all together.

To make matters worse, on the very day the glider fly-in was to begin aerial reconnaissance revealed that one of the three planned landing areas had been overlaid with logs of teak. Did the Japanese *expect* an aerial attack in the region? For a time it looked as though they did, but after some feverish consultation, it was agreed to accept the risks and go ahead with the operation, forgoing the overlaid field. It was a daring decision—and thoroughly justified by the event. Quite a few gliders were lost on the way in, and more of them crashed in the process of landing, but the Japanese were taken by surprise, and by mid-March 1944, Wingate's men were well established in their planned bases.

They thereupon began to venture out. On March 18, 77 Brigade, under Lt. Col. Michael Calvert, succeeded in cutting the railroad line to Myitkyina, and on March 24, 16 Brigade, under Brigadier Bernard Fergusson, began the last phase of its march toward Indaw—finally taken on April 27.

It was at just this point, on March 24, 1944, with Operation THURSDAY still in its opening stages and the Japanese offensive at Imphal moving toward its climax, that Wingate flew off to meet with Colonel Cochran at Lalaghat. No one knows precisely what went wrong. Perhaps the storms reported in the area were worse than expected. Perhaps it was Japanese fighters. Whatever happened, the charred debris of Wingate's B-25 was discovered on a hillside a few days later. It had crashed with such terrible force that parts of the bomber were driven some 18 feet into the earth. The resulting inferno had left little of the hapless crew and passengers. But

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recognizable even so were the blackened remains of a military pith helmet. Such was the fiery end of Orde Wingate, at all stages of his career a fierce and fiery commander.

Sad to say, the Chindits themselves did not long outlast him as an organized force. In May 1944, the hard-won Chindit strongholds were evacuated by air, and until its disbandment later that year, Wingate's Special Force was obliged to fight under the harsh, anglophobic overlordship of American General Joseph Stilwell. Not many Chindits were left on their feet—Wingate's brave dreams found their conclusion in bitterness and disappointment, not in a triumphal march through Bangkok and Hanoi.

In a strictly military sense, it hardly can be denied that at least Wingate's Burmese operations failed to live up to his extravagant hopes. Does that mean he was a military charlatan, all bluff and bluster without substance? Many have thought so. But the evidence is mixed. Wingate really did achieve something—several things, in fact.

First, it was Wingate who proved the British could match the Japanese in the jungle, and, in some measure, it was he who showed them how. Again, his exploits were crucial in terms of civilian morale, both in India and in Britain. Wingate was, furthermore, an unquestioned pioneer in the matter of air supply of ground forces and, on his second Burma mission in the air evacuation of wounded troops. There is, likewise, no doubt of the potency of behind-the-lines action, though in this respect, as in others, Wingate often overstated his case.

In sum, if as his detractors have claimed, Wingate was little more than a man who found himself in the right place at the right time, he was also, and to his credit, precisely the right sort of man to do the job that then needed doing.

As he rests at Arlington Cemetery—the result, by wartime rules, of his having died in an American plane—he would, no doubt, be pleased to know that had he only lived a bit longer, another greater job would have been his. By 1947 the Jewish army he once envisioned had come into concrete being. And, according to those who governed the fledging Israeli nation, when the post-war crisis of independence came, Wingate would have been commander of the new force. That is, perhaps, the most persuasive testimonial to the worth of his military skills. For there, beyond question, Wingate was right—the Israelis proved, when trained, to be formidable soldiers indeed. □

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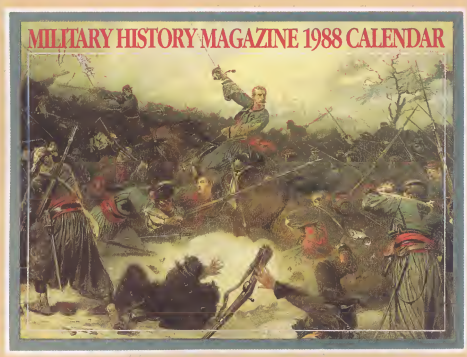

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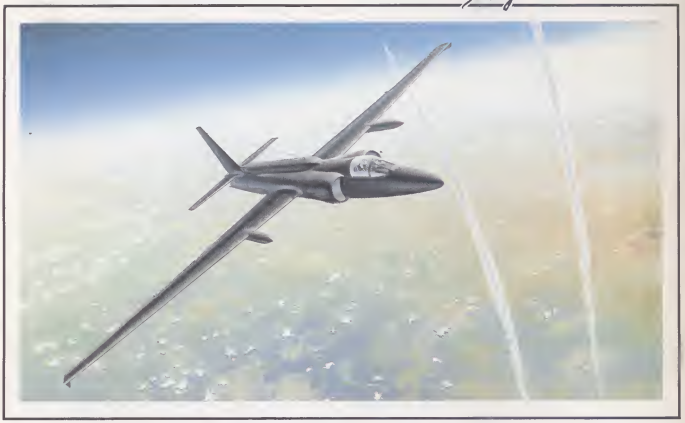

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In this painting, aviation artist Shigeo Koike collaborated with a veteran U-2 pilot of the 35th "Black Cat" Squadron, Nationalist Chinese Air Force, to portray as accurately as possible, one of his pilot's most harrowing flights. On this particular mission, accomplished in July 1966, the Nationalist Chinese Air Force Pilot, codenamed "Spike," banked his aircraft over his objective, a military complex in South Red China, to avoid a barrage of Surface-to-Air Missiles. The mission accomplished, the pilot is turning for home to egress the mainland and recover at his base after eight hours in the air altogether.

Each limited edition print also includes a descriptive, numbered certificate of authenticity. This latter historic document is individually signed by both the artist and the pilot, and is itself suitable for framing.

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